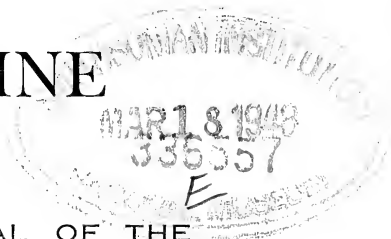


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THE AVICULTURAL MAGAZINE



BEING THE JOURNAL OF THE
AVICULTURAL SOCIETY FOR
THE STUDY OF BRITISH AND
FOREIGN BIRDS IN FREEDOM
AND IN CAPTIVITY

EDITED BY

DAVID SETH-SMITH, F.Z.S., etc.

FOURTH SERIES. VOL. IV.
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REPORT OF THE COUNCIL FOR 1926

After the various anxieties of last year, caused by the amalgamation with the Foreign Bird Club and the change of Editor and President, the officers have been able to settle down to more or less routine work, and the year 1926 may be said to have been the most successful since the war. The *Magazine* has been brought out each month up to time and the volume consists of 348 pages with nine coloured plates. (The largest volume ever produced was in 1902-1903, when it consisted of 410 pages and 12 coloured plates.)

Each month has brought us more and more members and the future looks more hopeful than it has done for many a long day.

We would like to tender our best thanks to all those who have contributed to the welfare of the Society. To authors who have helped to keep up the high standard of the *Magazine*. To donors to the illustration and general funds, for without their kind help we could not have all the coloured plates that go to make the *Magazine* so attractive. Especially we should like to thank Mr. Ezra for the plate of the Blue Alexandrine Parrakeet, Capt. Stokes for the plate of the Grey-winged Trumpeter and the Princess Stephanie's Bird of Paradise, and Mr. Whitley for the plate of Whitley's Conure.

We again have to thank Miss Chawner for her valuable help in translating French articles and we owe much to the untiring efforts of our editor, Mr. Seth-Smith, who, in spite of his busy life, is able to devote himself to the editing of what is now a first-class magazine.

(Signed for the Council)

E. MAUD KNOBEL,

Honorary Secretary and Treasurer.

December, 1926.

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- AMSLER, DR. MAURICE.
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1st JANUARY, 1926

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- BÜTTIKOFFER, Dr. J., C.M.Z.S., M.B.O.U. ; Hallnylstrasse 32, Berne, Switzerland. (Oct., 1907.) (*Hon. Mem.*)
- CALVOCORESÌ, P. J. ; Holme Hay, Croxteth Drive, Liverpool. (Oct., 1916.)
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- *CARPENTER, The Hon. Mrs. ; 9 Hay Hill, Berkeley Square, W. 1. (Feb., 1898.)
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- CARR-WALKER, HERBERT ; Pannal Hall, Pannal, near Harrogate. (June, 1917.)
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- DAWSON, W. LEON ; Museum of Comparative Oology, Santa Barbara, Cal., U.S.A. (Oct., 1919.)
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- DENNIS, Mrs. H. E. ; Lisle Court, Wootton Bridge, Isle of Wight. (March, 1903.)
- DENNY, Mrs. HENRY, C.B.E., Staplefield Place, Staplefield, Sussex. (May, 1924.)
- DICKINSON, Mrs. G. W., Upper Slaughter, Bourton-on-the-Water, Gloucestershire. (Jan., 1918.)
- DIRECTOR, THE ; Zoological Museum, Tring, Herts. (1912.)

- DONALD, C. H. ; Egerton Hall, Dharmsala Cantt., Kangra District, Punjab, India. (March, 1906.)
- DONOVAN, H. B. ; 184 Adelaide Street West, Toronto, Ontario, Canada. (May, 1925.)
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- *DREWITT, FREDERIC DAWTREY, M.A., M.D., F.R.C.P., F.Z.S. ; 14 Palace Gardens Terrace, Kensington, W. 8. (May, 1903.)
- DUNLEATH, The Lady ; Ballywalter Park, Ballywalter, Co. Down, Ireland. (August, 1897.)
- DUNMORE, OSCAR E. ; 23 Alexandra Road, Leicester. (Oct., 1922.)
- EDMONDS, HARRY ; The Limes, Tolworth Road, Ipswich. (Jan., 1926.)
- EDWARDS, MRS. A. E. ; Drayton Cottage, Ruislip, Middlesex. (Jan., 1925.)
- ELLIOT, F. S. ; Westfield, Kelvin Road, Ipswich, Suffolk. (Nov., 1925.)
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- FILLMER, H. R. ; Brendon, 22 Harrington Road, Brighton. (*Orig. Mem.*)
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- FINN, FRANK, B.A. ; c/o Grindley & Co., 54 Parliament Street, S.W. 1. (*Hon. Mem.*)
- FLOWER, Major STANLEY S., O.B.E., F.L.S. ; Spencer's Green, Tring, Herts. (July, 1925.)
- FOOKS, F. G. ; c/o Mon. J. Delacour, Chateau de Clères, Seine Inférieure, France. (Jan., 1926.)
- FROST, MRS. E. K. ; Glebe House, Hayes, Kent. (Jan., 1926.)
- FROST, WILFRED ; 6 Ward's Avenue, Fulham, S.W. 6. (July, 1908.)
- GARCKE, MRS. C. ; Wye Lodge, Maidenhead. (June, 1916.)
- GHIGI, il Prof. ALLESSANDRO ; Via d'Azeglio, Bologna, Italy. (Mar., 1911.)
- GIBBINS, WILLIAM B. ; Ettington, near Stratford-on-Avon. (June, 1895.)
- GODDARD, H. E. ; Birchcroft, Fetcham, near Leatherhead. (Feb., 1899.)
- GODDARD, MRS. ; The Lawn, Swindon. (Feb., 1923.)
- GOODWIN, T. J. ; 185 Old Kent Road, London, S.E. (Jan., 1920.)
- *GOSSE, PHILIP, M.R.C.S., L.R.C.P. ; Savile Club, Piccadilly, W. (April, 1911.)
- GOSSE, MRS. JAMES ; 9 Park Terrace, Park Side, South Australia. (July, 1923.)
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- GREENWOOD, MRS. B. ; Blencow, Maidstone. (Jan., 1924.)

- GREGORY, Mrs. ; Melville, Parkstone, Dorset. (Dec., 1901.)
- GREY, The Viscount, of Fallodon, K.G. ; Fallodon, Lesbury, Northumberland. (1913.)
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- GROVE, Hon. Mrs. JULIAN ; 57 Tregunter Road, London, S.W. 10. (March, 1917.)
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- GULBENKIAN, C. S. ; 27 Quai d'Orsay, Paris. (Dec., 1908.)
- *GURNEY, G. H. ; Keswick Hall, Norwich.
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- HAAGNER, A. K., F.Z.S., M.B.O.U., Director National Zoological Gardens ; Box 754, Pretoria, South Africa. (Nov., 1905.)
- *HAMILTON, Mrs. ; Villa Alexandra, Chernex sur Montreux, Switzerland.
- HAND, Miss R. ; Bruncombe, Boar's Hill, Oxford. (Jan., 1918.)
- HANKEY, ALGERNON A. ; 71 Lissenden Mansions, Highgate Road, N.W. 5. (June, 1923.)
- HANSELL, FRANK A. D. ; Nairnbank, Nuthill, Perthshire. (May, 1925.)
- HARGREAVES, Miss MOLLY ; Nazeing Park, Essex. (Nov., 1922.)
- HARMON, Dr. BYRON M. ; Essex Co. Sanatorium, Verona, N.Y., U.S.A. (Dec., 1924.)
- HARPER, EDMUND WILLIAM, F.Z.S., M.B.O.U. ; c/o Messrs. Smith, Stanistreet and Co., Ltd., Post Box No. 172, Calcutta, India. (Feb., 1901.)
- HARRISON, ION B. ; 8 Gordon Street, Glasgow. (May, 1923.)
- HARRISON, T. O. ; 127 Hastings Road, Sunderland. (March, 1918.)
- HARTLEY, Mrs. ; Lynchfield, Bishops Lydeard, Somerset. (April, 1897.)
- HARVEY, S., jun. ; Northgate Street, Millswood, Adelaide, South Australia. (Feb., 1925.)
- *HARVEY, The Hon. Lady ; Langley Park, Slough, Bucks. (Oct., 1906.)
- HAWKINS, L. W. ; 20 Norton Folgate, London, E. 1. (June, 1924.)
- HAYLEY, J. NEWTON. Colne Lodge, Cromer. (March, 1924.)
- HEBB, THOMAS ; Brooklea, The Downs, Luton, Beds. (April, 1914.)
- HENSTOCK, J. H. ; Market Place, Ashbourne, Derbyshire. (March, 1907.)
- HEUMANN, G. A. ; Ramona, Bucroft, Sydney, N.S.W. (Sept., 1913.)
- HEWITT, T. W. G. ; The Old Hall, Weelsby, Grimsby. (April, 1909.)
- HEYWOOD, RICHARD ; Pentney House, Narborough, Norfolk. (Oct., 1911.)
- HINKS, Mrs. ARTHUR ; 1 Percy Villas, Campden Hill, W. 8. (April, 1923.)
- HRD, Mrs. ; Lanark House, Fairfield Road, Old Charlton, S.E. 7. (March, 1925.)
- HIRST, ALBERT ; Broom Field, Longwood, Huddersfield. (July, 1923.)
- *HOLLAS, Mrs. K. E. ; Orta, Stuart Road, Preston. (Oct., 1922.)
- HOLTON, OLIVER W. ; Twin Brook Game Farm, Middleton, N.J., U.S.A. (June, 1925.)
- HOOD, HARRY S. ; Keith Theatre Building, Philadelphia, Pa., U.S.A. (April, 1925.)

- *HOPKINSON, EMILIUS, C.M.G., M.A., M.B.Oxon., D.S.O. ; Bathurst, Gambia, West Africa. (Oct., 1906.)
- *HOPSON, FRED C. ; 65 Northbrook Street, Newbury. (March, 1897.)
- *HORSBRUGH, C. B. ; Blessington House, Hillsborough, Co. Down.
HORSFORD, D. M. ; Bosvathic Penryn, Cornwall. (Aug., 1922.)
- HOUSDEN, JAMES B. ; Brooklyn, 31 Cator Road, Sydenham, S.E. 26. (Orig. Mem.)
- HOWARD, ROBERT JAMES, M.B.O.U. ; Shear Bank, Blackburn. (April, 1903.)
- HUNTING, T. CARLTON ; Gaybird Pheasantry, Great Missenden, Bucks. (June, 1925.)
- *HUTCHINSON, Miss ALICE ; Alderton, Chippenham, Wilts. (Aug., 1907.)
- INGLEFIELD, Mrs. [R. R. C.] ; 27 Cadogan Square, S.W. 1. (Jan., 1924.)
- *INGRAM, Capt. COLLINGWOOD ; The Bungalow, Westgate-on-Sea. (Oct., 1905.)
- JACKSON, B. ; 33 Church Street, Bingley, Yorks. (Jan., 1926.)
- JACKSON, Major A. E. BLYTHE ; Glenholme, Bladon Muir, Belfast. (Sept., 1925.)
- JENNISON, GEORGE, M.A. ; Zoological Gardens, Belle Vue, Manchester. (April, 1918.)
- JOHNSON, Miss J. STURTON ; Orotava House, Ore, Hastings. (Sept., 1910.)
- JOHNSTONE, Mis. ; Burtswood, Groombridge, Sussex.
- JOHNSTONE, ROBERT PERCY, Longthwaite Road, Wigton, Cumberland. (March, 1925.)
- KEATOR, BEVERLY ; Hartsdale, N.Y., U.S.A. (June, 1924.)
- KENNEDY, Mrs. T. E. (May, 1908.)
- KERSHAW, Miss MARY E. ; 7 Westcliffe Road, Birkdale, Southport. (June, 1924.)
- KEWLEY, Mrs. M. A. ; Barwick House, Yeovil, Somerset. (Sept., 1910.)
- KINKEAD, GEORGE W. ; 9 Donegal Square, S. Belfast. (June, 1924.)
- KNOBEL, Miss E. MAUD, F.Z.S., M.B.O.U. ; 32 Tavistock Square, W.C. 1. (Aug., 1916.) (*Hon. Secretary and Treasurer.*)
- KUSER, J. DRYDEN ; Faircourt, Bernardsville, New Jersey, U.S.A. (1912.)
- LAMBRICK, Prebendary M. ; Blagdon Rectory, Bristol. (Jan., 1921.)
- LANCASTER, Mrs. ; 7 Victoria Terrace, Walsall. (Dec., 1923.)
- LAUDER, P. ; Union Insurance Society of Canton, Ltd., Hong-kong, China.
- LAW, SATYA CHARAN ; 24 Sukeas Street, Calcutta. (1919.)
- LEACH, C. F. ; Vale Lodge, Leatherhead, Surrey. (June, 1914.)
- LECALLIER, Madame ; 109 Rue de la Republique, Caudebec-les-Elbeuf, France. (April, 1918.)
- LEWIS, ARTHUR ; Brambleside, Ferndown, Dorset. (Jan., 1926.)
- LEWIS, J. SPEDAN ; Chairman's Office, Messrs. Peter Jones, Ltd., Sloane Square, S.W. 1. (Sept., 1924.)
- LEWIS, W. ; 37 Somerset Road, Teddington, Middlesex. (Jan., 1923.)

- LIBRARY INTERNATIONAL INSTITUT D'AGRICULTURE, Villa Umberto, 1. Rome 10.
- LIENAU, C. H. A.; Newbury, 23 Victoria Avenue, Unley Park, South Australia. (Oct., 1917.)
- *LILFORD, The Lady; Lilford Hall, Oundle, Northants. (Jan., 1898.)
- *LOCKYER, ALFRED; High Croft, Eversley Park Road, Winchmore Hill, N.21. (Dec., 1905.)
- LODGE, GEORGE E.; Hawkhouse, Park Road, Camberley, Surrey. (May, 1923.)
- LONGDON, Mrs. C. A.; Arreton, Epsom Road, Guildford. (Feb., 1909.)
- LONGLANDS, F.; 66 East Street, Chichester. (May, 1925.)
- *LOVELACE, The Countess of; Wentworth House, Chelsea Embankment, S.W.3. (May, 1906.)
- LOVETT, C.; Glendale Park, Nashville, Tenn., U.S.A. (Dec., 1912.)
- LOW, GEORGE E.; 14 Royal Terrace East, Kingstown, Ireland. (Mar., 1913.)
- LUIG, Dr. BRUNO; 105 Avenue du Diamant, Bruxelles. (Nov., 1924.)
- LUDWIG, Herr OTTO; Merseburgerstrasse 20, Halle a.d. Saale, Germany. (Jan., 1925.)
- MCCALL, C. HOME, C.B.E.; Primrose Cottage, Walberswick, Southwold. (June, 1923.)
- MCCORQUODALE, Mrs.; Cound Hall, Shrewsbury. (Jan., 1920.)
- MCDONALD, Miss B.; The Cottage, Hallington Park, St. Leonard's-on-Sea. (Jan., 1922.)
- MACKAY, K. STEWART.
- MACKIE, PHILIP C.; Spe-Cott, Ancaster Road, Far Headingley, Leeds. (Jan., 1926.)
- MACKLIN, C. H., M.R.C.S., L.R.C.P.; 90 Dunstable Street, Ampthill, Beds. (May, 1923.)
- MALONE, Mrs. M. L'ESTRANGE; West Lodge, Malton, Yorks. (Jan., 1902.)
- MANCHESTER PUBLIC LIBRARIES; Reference Library, Piccadilly, Manchester. (July, 1913.)
- MARESI, POMPEO N.; 36 W. 44th Street, New York, N.Y., U.S.A. (June, 1924.)
- MARRINER, JOHN SUMNER; Newlands Cottage, Eynsham, Oxon. (Oct., 1923.)
- *MARSDEN, J. W., F.Z.S.; Bank's Lane, Heysham Harbour, Lancs. (March, 1914.)
- *MARSHALL, ARCHIBALD MCLEAN; Chitcombe, Brede, Sussex. (Jan., 1906.)
- MARTIN, A. H.; Suva, Fiji Islands. (July, 1925.)
- MASON, D.; Anglet, B.P., France. (Jan., 1926.)
- MASON, F. W.; Northcliffe, Felixstowe, (June, 1923.)
- MAVROGORDATO, Mrs. T.; Tanglewood, South Godstone. (July, 1923.)
- MAXWELL, C. T.; 1 Shardcroft Avenue, Herne Hill, S.E. 24. (Dec., 1908.)
- MAXWELL-JACKSON, Miss M.; Berry End, Knaresborough, Yorks. (Jan., 1913.)

- MAYER, F. W. S. ; Wulfruna, Concord Road, Homebush, N.S.W. (Aug., 1922.)
- MEADE-WALDO, E. G. B., F.Z.S., M.B.O.U. ; Stonewall Park, Edenbridge Kent. (Jan., 1895.)
- METZGER, C. T. ; 6312 So. Ashland Avenue, Chicago, Ill., U.S.A. (1923.)
- MILLER, Rev. T. W. T. ; The Rectory, Southwick, Sussex. (Sept., 1924.)
- MORTIMER, Mrs. ; Wigmore, Holmwood, Surrey. (Orig. Mem.)
- MOUNTAIN, BRIAN ; Norbury Park, Dorking, Surrey. (Feb., 1923.)
- MOUNTAIN, Capt. WALTON ; Groombridge Place, Kent. (Feb., 1923.)
- MULVEY, W. E. ; 5 Overleigh Road, Chester. (Jan., 1921.)
- MURAT, PRINCE PAUL ; 68 Rue de la Faisanderie, Paris XVI. (July, 1923.)
- MURTON-MARSHALL c/o Midland Bank, Ltd., 92 Kensington High Street, S.W. (Aug., 1913.)
- MUSEUM OF COMPARATIVE ZOOLOGY ; Cambridge, Mass., U.S.A.
- MYLAN, JAMES GEORGE, B.A., M.B. (Univ. Coll.), L.R.C.P. and L.R.C.S. (Ed.), etc. ; 90 Upper Hanover Street, Sheffield. (Dec., 1901.)
- NAIRNE, Dr. S. ; Burleigh Mead, Hatfield, Herts. (Jan., 1920.)
- NATIONAL ZOOLOGICAL PARK (The Superintendent) ; Washington, Dt., U.S.A.
- NELSON, RICHARD, 735 Holderness Road, Hull. (April, 1925.)
- NEVILLE, Capt. T. N. C. ; 48 Sloane Square, S.W.1. (July, 1917.)
- NEWMAN, Mrs. C. T. ; Tip Tree, Strathfield, Sydney, Australia. (July, 1924.)
- NEWMAN, T. H., F.Z.S., M.B.O.U. ; Verulam, Forty Lane, Wembley Park, Middlesex. (May, 1900.)
- NEWMARCH, C. T. ; Gamage's, Ltd., Holborn, W.C. (Aug., 1915.)
- NEW YORK ZOOLOGICAL SOCIETY, New York, U.S.A.
- NICOL, HAMISH, F.R.C.S., F.Z.S. ; 35 Welbeck Street, W. 1. (Jan., 1926.)
- *NICHOLS, WALTER B., M.B.O.U. ; Stour Lodge, Bradfield, Manningtree. (Jan., 1907.)
- NICHOLSON, ALFRED, E. ; Blenheim, Forthview Terrace, Blackhall, Midlothian. (Feb., 1925.)
- NORMAN, J., jun. ; 333 Fulham Road, S.W. 10. (Jan., 1925.)
- NORTH, W. N. D. ; Meadow Court, Stoughton Drive, Leicester. (Dec., 1924.)
- "NOSHOMU" ; c/o Maruzen Co., Tokyo, Japan. (1919.)
- *OBERHOLSER, HARRY C. ; 2805 18th Street, N.W. Washington, D.C., U.S.A (Oct., 1903.)
- OGLE, BERTRAM SAVILLE, M.B.O.U. ; Mill House, Steeple Aston, Oxford. (Dec., 1902.)
- O'REILLY, NICHOLAS S. ; 144 Eastern Road, Kemp Town, Brighton. (Dec., 1894.)
- *PAM, Major ALBERT, F.Z.S. ; Wormleybury, Broxbourne, Herts. (Jan., 1906.)

- PARKER, GEORGE F. ; 38 Croydon Avenue, Croydon, Sydney, Australia. (April, 1925.)
- PARKER, S. T. ; 42 Turner Road, Dereham Road, Norwich. (Jan., 1922.)
- PENROSE, FRANK G., M.D., F.Z.S., M.B.O.U. ; Woodbury, 9 Grove Road, Eastcliff, Bournemouth. (Dec., 1903.)
- PERREAU, Mrs. G. A. ; 16 Evelyn Court, Lansdowne Terrace, Cheltenham. (Sept., 1916.)
- PETTIGREW, M. ; 6 Fifth Avenue, Kelvinside, Glasgow, W. (Jan., 1920.)
- PHILLIPS, JOHN C. ; Wenham, Mass., U.S.A. (March, 1910.)
- PHILLIPS, L. L.
- *PICKFORD, RANDOLPH JOHN ; Thorn Leas, Carmel Road, Darlington. (Feb., 1903.)
- PIKE, L. G. ; King Barrow, Wareham, Dorset. (1912.)
- PITHIE, Miss D. E. ; 68 Clarendon Road, Southsea, Portsmouth. (Jan., 1918.)
- PLATH, KARL ; 2847 Giddings Street, Chicago, U.S.A. (July, 1924.)
- *POCOCK, R. I., F.R.S., F.L.S., F.Z.S. ; 7 Taviton Street, W.C.1. (Feb., 1904.)
- POLTIMORE, Lady ; Court Hall, North Molten. (Jan., 1926.)
- POND, Mrs. T. ; Wylfa, Llangollen. (Nov., 1902.)
- PORTER, SIDNEY ; Selwyn House, Old Normanton, Derby. (April, 1920.)
- *POTTER, BERNARD E., M.B., M.R.C.S., L.R.C.P. ; 17 Portland Place, W.
- POWELL, Miss M. M. ; Roselyn, Oakhill Park, Liverpool. (1914.)
- PRINCETON UNIVERSITY LIBRARY ; U.S.A.
- PURVIS, Mrs. C. J. ; West Acres, Alnwick, Northumberland. (Oct., 1920.)
- PYCRAFT, W. P., A.L.S., F.Z.S., M.B.O.U., etc. ; British Museum (Nat. Hist.), Cromwell Road, S.W.7. (Nov., 1904.) (*Hon. Mem.*)
- PYMAN, Miss E. E. ; West House, West Hartlepool. (June, 1919.)
- *RATTIGAN, Capt. G. E. ; Tenby Lodge, Paignton, S. Devon. (Aug., 1908.)
- REEVE, Capt. J. S., F.Z.S. ; Leadenham House, Lincoln. (March, 1908.)
- REID, ALFRED ROBERT ; Curator of the Beaumaris Zoo., Hobart, Tasmania. (Nov., 1925.)
- REID, W. J. G. ; Funchal, Madeira. (Feb., 1895.)
- ROBERTS, Miss IDA ; Beaumaris, Montpelier Street, Hobart, Tasmania. (Jan., 1923.)
- ROGERS, H. E. ; "Arequipa," 7 Aigburth Road, Liverpool. (June, 1919.)
- *ROGERS, Col. J. M., D.S.O., F.Z.S., M.B.O.U. (late Royal Dragoons) ; Riverhill, Sevenoaks. (April, 1907.)
- ROGERS, Mrs. ; Keston Mount, Talbot Road, Bournemouth. (Feb., 1925.)
- ROOPER, Mrs. F. ; 11 Maze Hill, St. Leonard's-on-Sea. (Aug., 1924.)
- ROTHSCHILD, JAMES DE ; 34 Park Street, W.1. (March, 1923.)
- ROTHSCHILD, LIONEL DE, M.P. ; 46 Park Street, W.1. (Nov., 1913.)

- ROTHWELL, JAMES E. ; 153 Sewall Avenue, Brookline, Mass., U.S.A. (Oct., 1910.)
- ROYAL ZOOLOGICAL SOCIETY OF IRELAND ; Phoenix Park, Dublin. (Oct., 1905.)
- RUMSEY, LACY ; 23 Rua de Serpa Pinto, Villa Nova de Gaya, Oporto, Portugal. (April, 1919.)
- *ST. QUINTIN, WILLIAM HERBERT, F.Z.S., M.B.O.U. ; Scampston Hall, Rillingon, York. (Orig. Mem.)
- SAKAI TATSUZO ; 2 Chrome, Kano Cho, Kobe, Japan. (1919.)
- SALKELD, WILLIAM ; Ravenswood, Kirkoswald, R.S.O., Cumberland. (June, 1922.)
- *SAMUELSON, Lady ; Hatchford Park, Cobham, Surrey. (July, 1916.)
- SAWREY-COOKSON, Miss JUNE ; 186 Cromwell Road, London, S.W. 5. (Sept., 1923.)
- SCHANENSEE, R. MEYER DE ; 1213 Spruce Street, Philadelphia, Pa., U.S.A. (Feb., 1924.)
- SCHUYL, D. G. ; 12 Toe-Haringvliet, Rotterdam, Holland. (Jan., 1914.)
- *SCLATER, W. L., M.A., F.Z.S. ; 10 Sloane Court, S.W.3. (Aug., 1904.)
- SCOTT, Capt. B. HAMILTON ; Hamildean, Ipswich. (1912.)
- SCRIBE, Monsieur RENÉ ; 38 Coupure, Gand, Belgium. (Oct., 1925.)
- *SEPPINGS, Lieut.-Col. J. W. H. ; c/o Lloyd's Bank, Ltd., Cox & King's Branch (K. Section), 6 Pall Mall, London, S.W. 1. (Sept., 1907.)
- *SETH-SMITH, DAVID, F.Z.S., M.B.O.U. ; Zoological Society, Regent's Park, N.W. 8. (Dec., 1894.) (*Hon. Editor.*)
- SHANNON, Mrs. W. J. ; Commandant's House, Lydd, Kent. (1915.)
- SHENSTONE, Mrs. ; Chantry House, Hurstpierpoint, Sussex. (April, 1925.)
- SHERRIFF, A. ; Edge Hill, 8 Ranulf Road, N.W. 2. (March, 1923.)
- SHIERS, Mrs. P. H. ; Brookfield, Cheadle, Cheshire. (Jan., 1926.)
- *SICH, HERBERT LEONARD ; Corney House, Burlington Lane, Chiswick, W. 4. (Feb., 1902.)
- SILVER, ALLEN, F.Z.S. ; 18 Baneswell Road, Newport, Mon.
- SIMPSON, ARCHIBALD ; Stone Gappe, Bardsey, Yorks. (Feb., 1901.)
- SIMPSON, H. W. ; 6 Barry Road, Stonebridge, Willesden, N.W. 10. (Nov., 1924.)
- SLADE, G. J. ; 34 Milton Road, Fitzhugh, Southampton. (Feb., 1915.)
- *SMALLEY, F. W., F.Z.S., M.B.O.U. ; Hawthorns, 193 Clapham Road, S.W. 9. (1912.)
- SMALLWOOD, Miss VALENTINE ; 14 Buckingham Gate, S.W. 1. (Jan., 1926.)
- SMETZ-MONDEZ, Dr. J. G. ; La Hétraie, Genval, Belgium. (Aug., 1924.)
- SMITH, Mrs. JESSIE ; Fenleigh, Willaston, near Birkenhead. (Sept., 1925.)
- SMITH, PARIS ; 11 Broomhill Road, Woodford Green, Essex. (Jan., 1925.)
- *SMITH, PHILIP ; Haddon House, Ashton-on-Mersey, Sale, Manchester. (Dec., 1917.)
- SMITH, W. PROCTOR ; Haddon House, Ashton-on-Mersey, Sale, Manchester. (Nov., 1917.)

- SMITH, W. W. ; Cranmer, Dower Avenue, Wallington, Surrey. (April, 1920.)
- SNAPE, Major A. E., O.B.E. ; Malvern, Lower Walton, Warrington. (March, 1918.)
- SOUTHOFF, M. G. DE ; 13 Via San Spiritu, Florence. (1921.) (*Hon. Mem.*)
- SOUTHPORT CORPORATION, CURATOR OF ; Hesketh Park, Southport. (Jan., 1904.)
- SPRAWSON, EVELYN ; M.C., M.R.C.S., F.Z.S., 68 Southwood Lane, Highgate, N. 6. (June, 1923.)
- SPROSTON, Mrs. ; Elm House, Nantwich, Cheshire. (June, 1917.)
- SPURWAY, N. B. ; Glenwood, Stoneygate, Leicester. (April, 1923.)
- STARK, J. ; Woods Cottage, Haddington, Scotland. (Jan., 1924.)
- STENT, STIRLING ; Beechlands, Bedhampton, Havant, Hants. (March, 1924.)
- STEVENS, H. ; c/o Midland Bank, Ltd., Tring. (Oct., 1911.)
- STILEMAN, G. R. ; Stamford, West Byfleet, Surrey. (Dec., 1925.)
- STILLMAN, PAUL F. ; Bayhead, N.J., U.S.A. (Nov. 1923.)
- STOKES, Capt. H. S. ; Longdon, Stafford. (Oct., 1922.)
- STOREY, Mrs. A. ; Hawling Manor, Andoverford, Glos. (Nov., 1912.)
- STRUBEN, Mrs. F. ; Spitchwick Manor, Ashburton, S. Devon. (Jan., 1923.)
- SUGGITT, ROBERT ; Suggitt's Lane, Cleethorpes, Grimsby. (Dec., 1903.)
- SUGGITT, W. E. ; Suggitt's Lane, Cleethorpes, Grimsby. (Jan., 1915.)
- SUMMERSKILL, C. C. ; 6 Wood End Road, Winton, Bournemouth. (March, 1925.)
- SUTCLIFFE, ALBERT ; Fairholme, Grimsby. (Feb., 1906.)
- SWAYNE, HENRY A. ; 29 Percy Place, Dublin. (Jan., 1913.)
- SYKES, JOHN ; Home Park Cottage, Inveresk, Musselburgh. (Jan., 1912.)
- TAKANO, T. Z. ; Koyama, 28 Asagaya, Soginanimachi Toyotamagun, Tokyo-fu, Japan. (Jan., 1921.)
- TAKA-TSUKASA, PRINCE NOBUSUKE ; 106 Honmuracho, Azabu, Tokyo, Japan. (Feb., 1914.)
- *TANNER, Dr. FRANK L. ; Vanvert House, Guernsey. (Jan., 1914.)
- TARONGA ZOOLOGICAL PARK TRUST ; Mosman, Sydney, Australia. (Aug., 1913.)
- *TAVISTOCK, The Marquess of ; Warblington House, Havant, Hants. (1912.)
- TESCHEMAKER, W. E., B.A. ; Ringmore, Teignmouth, Devon. (May, 1904.)
- TEFIN, J. E. ; 3910 S. Main Street, Los Angeles, Cal., U.S.A. (Jan., 1926.)
- *THOM, ALFRED A. ; Whitewell Lodge, Whitchurch, Salop. (June, 1913.)
- THOMAS, HENRY ; 15 Clinning Road, Birkdale, Southport. (Jan., 1895.)
- THOMASSET, BERNARD C., F.Z.S. ; Seend, Near Melksham, Wilts. (July, 1896.)
- THOMSON, Dr. ; Bankstown, near Sydney, Australia. (Jan., 1926.)
- THOMPSON, Mrs. A. C. ; Glaisdale, Ely, Cambs. (Dec., 1924.)
- THORNHILL, Col. C. J. M., C.M.G., D.S.O. ; Sevenacres, Binfield, nr. Bracknell, Berkshire. (Oct., 1925.)
- TODD, HORATIO ; Bromleigh, Sandown Road, Knock-Belfast. (Aug., 1924.)
- TOMLINSON, MALCOLM R. ; Shepherd's House, Inveresk, Midlothian. (April, 1913.)

- TOWNSEND, S. M. ; 3 Swift Street, Fulham, London, S.W. (*Orig. Mem.*)
- TRANSSVAAL MUSEUM ; The Director, Transvaal Museum, Pretoria. (Jan., 1921.)
- TRAVERS, Mrs. J. ; Windmill Cottage, Mayfield, Sussex. (Dec., 1903.)
- TURNER, HERBERT J. ; Tremadoc, Keyberry Road, Newton Abbott. (Jan., 1925.)
- UPPINGHAM SCHOOL ; the School Library, The Old School House, Uppingham. (Nov., 1920.)
- VALENTINE, ERNEST ; 7 Highfield, Workington. (May, 1899.)
- VALPY, EDWARD ; 27 Wimbledon Park Road, S.W. 18. (Jan., 1926.)
- VAN HEYST, A. ; Wyk by Duurstede, Holland. (July, 1924.)
- VAN TOMME, ERNEST ; 4 Rue de Mouseron, Courtrai, Belgium. (Jan., 1923.)
- VENNER, Rev. P. K. ; c/o Mrs. McKay, 20 St. John's Terrace Road, Redhill, Surrey. (April, 1923.)
- VOIGT, WALTER ; 13, Feodorastrasse, Jena, Germany. (Jan., 1926.)
- WADDELL, Miss E. G. R. PEDDIE ; 4 Great Stuart Street, Edinburgh. (Feb., 1909.)
- WALKER, Miss H. K. O. ; Chesham, Bury, Lancs. (Feb., 1895.)
- WALL, Mrs. ; Meadowside, Marlborough, Wilts. (Nov., 1924.)
- WASHINGTON, S. ; 47 Prospect Park West, Brooklyn, N.Y., U.S.A. (Jan., 1924.)
- WAUD, Capt. L. REGINALD ; Falcon Close, Woolton Hill, near Newbury. (May, 1913.)
- WAXMAN, A. E. WRIGHT DE BERRI ; Maitai, Murray Road, Beecroft, N.S.W. (Aug., 1914.)
- WEAVER, Mrs. H. H. New Hope, Bucks Co., Penna, U.S.A. (Dec. 1924.)
- WEDGE, E. ; Overdale, Chorley Wood, Rickmansworth, Herts. (Feb., 1915.)
- WEIL, HARRY ; 443 West 13th Street, New York City, N.Y., U.S.A. (Feb., 1924.)
- WEIR, J. ; Douglas Cottage, Ashley, New Milton, Hants. (July, 1918.)
- WELCH, F. D., M.R.C.S., L.R.C.P. ; Hartley, Longfield, Kent. (March, 1920.)
- *WELLINGTON, Her Grace the Duchess of ; Ewhurst Park, Basingstoke. (Oct., 1913.)
- WHALE, CYRIL M., F.Z.S. ; 289 Brixton Road, S.W. 9. (Feb., 1925.)
- WHIPHAM, Mrs. U. F. ; 34 Westbourne Park Road, W. 2 ; and St. Loyes, Heavitree, Exeter. (July, 1921.)
- WHISTLER, H., I.P., F.L.S., F.Z.S. ; c/o Central Police Office, Lahore, Punjab, India. (Jan., 1913.)
- WHITE, JOHN YORK ; Celandine, 138 Verdant Lane, Catford, S.E. 6. (Jan., 1925.)
- WHITLAW, Miss ROSA M. ; Amerden, Taplow. (Aug., 1914.)
- WHITLEY, HERBERT ; Primley Hill, Paignton, S. Devon. (Sept., 1923.)
- WILLFORD, HENRY ; Sans Souci, Havenstreet, Ryde, Isle of Wight. (Nov., 1907.)

WILLIAMS, SIDNEY, F.Z.S. ; Oakleigh, 110 Riverway, Palmer's Green, London, N. 13. (Oct., 1910.)

WILLIAMSON, T. F. ; c/o Mrs. Crocker, Whitman Estate, Burlingame, California, U.S.A. (Aug., 1917.)

WILLIS, Mrs. ; Lymecrest, Coleraine Road, Portrush, Ireland (North). (April, 1925.)

WILLS, LADY ; Littlecote, Hungerford. (March, 1924.)

WILSON, Miss F. M. ; 15 Goldsmith Avenue, Acton, Middlesex. (March, 1906.)

*WILSON, Dr. MAURICE A. ; Walton Lodge, Pannal, Harrogate. (Oct., 1905.)

WINTER, DWIGHT ; Center and Negley Avenue, Pittsburg, Pa., U.S.A. (1922.)

WOOD, Dr. CASEY ; 7 West Madison Street, Chicago, U.S.A. (Sept., 1922.)

WOODWARD, KENNETH M. ; U.S.A. (March, 1915.)

WORKMAN, WILLIAM HUGHES, M.B.O.U. ; Lismore, Windsor Avenue, Belfast. (May, 1903.)

*WORMALD, HUGH ; Heathfield, East Dereham, Norfolk. (Dec., 1904.)

WORSLEY, Rev. H. M. ; Burneston Vicarage, Bedale, Yorks. (May, 1925.)

ZOOLOGICAL SOCIETY OF PHILADELPHIA : 34th Street, and Girard Avenue, Philadelphia, Penn., U.S.A. (Jan., 1920.)

ZUG, Mrs. CHARLES GORDON ; 925 Ridge Avenue, N.S., Pittsburg, Pa., U.S.A. (Jan., 1926.)

Rules of the Avicultural Society

As amended, December, 1924

1.—The name of the Society shall be THE AVICULTURAL SOCIETY, and its object shall be the study of Foreign and British Birds in freedom and in captivity. Poultry, Pigeons, and Canaries shall be outside the scope of the Society. The year of the Society, with that of each volume of the Society's Magazine, which shall be known as *The Avicultural Magazine*, shall commence with the month of January and end on the 31st of December following.

2.—The Avicultural Society shall consist of Ordinary and Honorary Members, and the latter shall be restricted in number to six, and be elected by the Council.

3.—The Officers of the Society shall be elected, annually if necessary, by members of the Council in the manner hereinafter provided, and shall consist of a President, one or more Vice-Presidents, a Secretary, an Editor, a Treasurer, an Auditor, a Scrutineer, and a Council of eighteen members. The Secretary, Editor, and Treasurer shall be *ex officio* Members of the Council.

4.—New Members shall be proposed in writing, and the name and address of every person thus proposed, with the name of the Member proposing him, shall be published in the next issue of the Magazine. Unless the candidate shall, within two weeks after the publication of his name in the Magazine, be objected to by at least two Members, he shall be deemed to be duly elected. If five members shall lodge with the Secretary objections to any candidate he shall not be elected, but the signatures to the signed objections must be verified by the Scrutineer. If two or more Members (but less than five) shall object to any candidate, the Secretary shall announce in the next number of the Magazine that such objections have been lodged (but shall not disclose the names of the objectors), and shall request the Members to vote upon the question of the election of such candidate. Members shall record their votes in sealed letters addressed to the Scrutineer, and a candidate shall not be elected unless two-thirds of the votes recorded be in his favour; nor shall a candidate be elected if five or more votes be recorded against his election.

5.—Each Member shall pay an annual subscription of £1, to be due and payable in advance on the 1st of January in each year. New Members shall pay, in addition, an entrance fee of 10s. 6d.; and, on payment of their entrance fee and subscription, they shall be entitled to receive all the numbers of the Society's Magazine for the current year.

6.—Members intending to resign their membership at the end of the current year of the Society are expected to give notice to the Secretary before the 1st of December, so that their names may not be included in the "List of Members", which shall be published annually in the January number of the Magazine.

7.—The Magazine of the Society shall be issued on or about the first day of every month, and forwarded, post free, to *all the Members who shall have paid their subscriptions for the year*; but no Magazine shall be sent or delivered to any Member until the annual subscription shall have reached the hands of the Business Secretary or the Publishers. Members whose subscriptions shall not have been paid as above by the first day in November in any year shall cease to be Members of the Society, and shall not be re-admitted until a fresh entrance fee, as well as the annual subscription, shall have been paid.

8.—The Secretary, Editor, and Treasurer shall be elected for a term of five years, and, should a vacancy occur, it may be temporarily filled up by the Executive Committee (see Rule 10). At the expiration of the term of five years in every case it shall be competent for the Council to nominate the same officer, or another Member, for a further time of five years, unless a second candidate be proposed by not less than twenty-five Members of at least two years' standing, as set forth below.

In the November number of the Magazine preceding the retirement from office of the Secretary, Editor, or Treasurer, the Council shall publish the names of those members whom they have nominated to fill the vacancies thus created; and these members shall be deemed duly elected unless another candidate or candidates be proposed by not less than fifteen Members of at least two years' standing. Such proposal, duly seconded and containing the written consent of the nominee to serve, if elected, in the capacity for which he is proposed, must reach the Secretary on or before the 15th of November.

The Council shall also publish yearly in the November number of the Magazine the names of those members nominated by them for the posts of Auditor and Scrutineer respectively.

9.—The Members of the Council shall retire by rotation, two at the end of each year of the Society (unless a vacancy or vacancies shall occur otherwise) and two other Members of the Society shall be recommended by the Council to take the place of those retiring. The names of the two Members recommended shall be printed in the November number of *The Avicultural Magazine*. Should the Council's selection be objected to by fifteen or more Members, these shall have power to put forward two other candidates, whose names, together with the signatures of no less than fifteen Members proposing them, must reach the Hon. Secretary *by the 15th of November*. The names of the four candidates will then be printed on a voting paper and sent to each Member with the December

number of the Magazine, and the result of the voting published in the January issue. Should no alternative candidates be put forward, in the manner and by the date above specified, the two candidates recommended by the Council shall be deemed to have been duly elected. In the event of an equality of votes the President shall have a casting vote.

If any Member of the Council does not attend a meeting for two years in succession the Council shall have power to elect another member in his place.

10.—Immediately after the election of the Council that body shall proceed to elect three from its Members (*ex officio* Members not being eligible). These three, together with the Secretary, Treasurer, and Editor, shall form a Committee known as the Executive Committee. Members of the Council shall be asked every year (whether there has been an election of that body or not) if they wish to stand for the Executive, and in any year when the number of candidates exceeds three there shall be an election of the Executive.

The duties of the Executive Committee shall be as follows :—

- (i) To sanction all payments to be made on behalf of the Society.
- (ii) In the event of the resignation of any of the officers during the Society's year, to fill temporarily the vacancy until the end of the year. In the case of the office being one which is held for more than one year (e.g. Secretary, Editor, or Treasurer) the appointment shall be confirmed by the Council at its next meeting.
- (iii) To act for the Council in the decision of any other matter that may arise in connexion with the business of the Society.

The decision of any matter by the Executive to be settled by a simple majority (five to form a quorum). In the event of a tie on any question, such question shall be forthwith submitted by letter to the Council for their decision.

The Executive shall not have power

- (i) To add to or alter the Rules ;
- (ii) To expel any Member ;
- (iii) To re-elect the Secretary, Editor, or Treasurer for a second term of office.

It shall not be lawful for the Treasurer to pay any account unless such account be duly initialled by the Executive.

It shall be lawful for the Secretary or Editor to pledge the Society's credit for a sum not exceeding £15.

Should a Member wish any matter to be brought before the *Council* direct such matter should be sent to the Secretary with a letter stating that it is to be brought before the Council at their next meeting, otherwise communications will in the first place be brought before the Executive.

A decision of a majority of the Council, or a majority of the Executive endorsed by the Council, shall be final and conclusive in all matters.

11.—The Editor shall have an absolute discretion as to what matter shall be published in the Magazine (subject to the control of the Executive Committee).

The Secretary and Editor shall respectively refer all matters of doubt and difficulty to the Executive Committee.

12.—The Council (but not a committee of the Council) shall have power to alter and add to the Rules, from time to time, in any manner they may think fit. Five to form a quorum at any meeting of the Council.

13.—The Council shall have power to expel any Member from the Society at any time without assigning any reason.

14.—Neither the office of Scrutineer nor that of Auditor shall be held for two consecutive years by the same person.

15.—The Scrutineer shall not reveal to any person how any Member shall have voted.

The Society's Medal

RULES

The Medal may be awarded at the discretion of the Committee to any Member who shall succeed in breeding, in the United Kingdom, any species of bird which shall not be known to have been previously bred in captivity in Great Britain or Ireland. Any Member wishing to obtain the Medal must send a detailed account for publication in the Magazine within about eight weeks from the date of hatching of the young, and furnish such evidence of the facts as the Executive Committee may require. The Medal will be awarded only in cases where the young shall live to be old enough to feed themselves, and to be wholly independent of their parents.

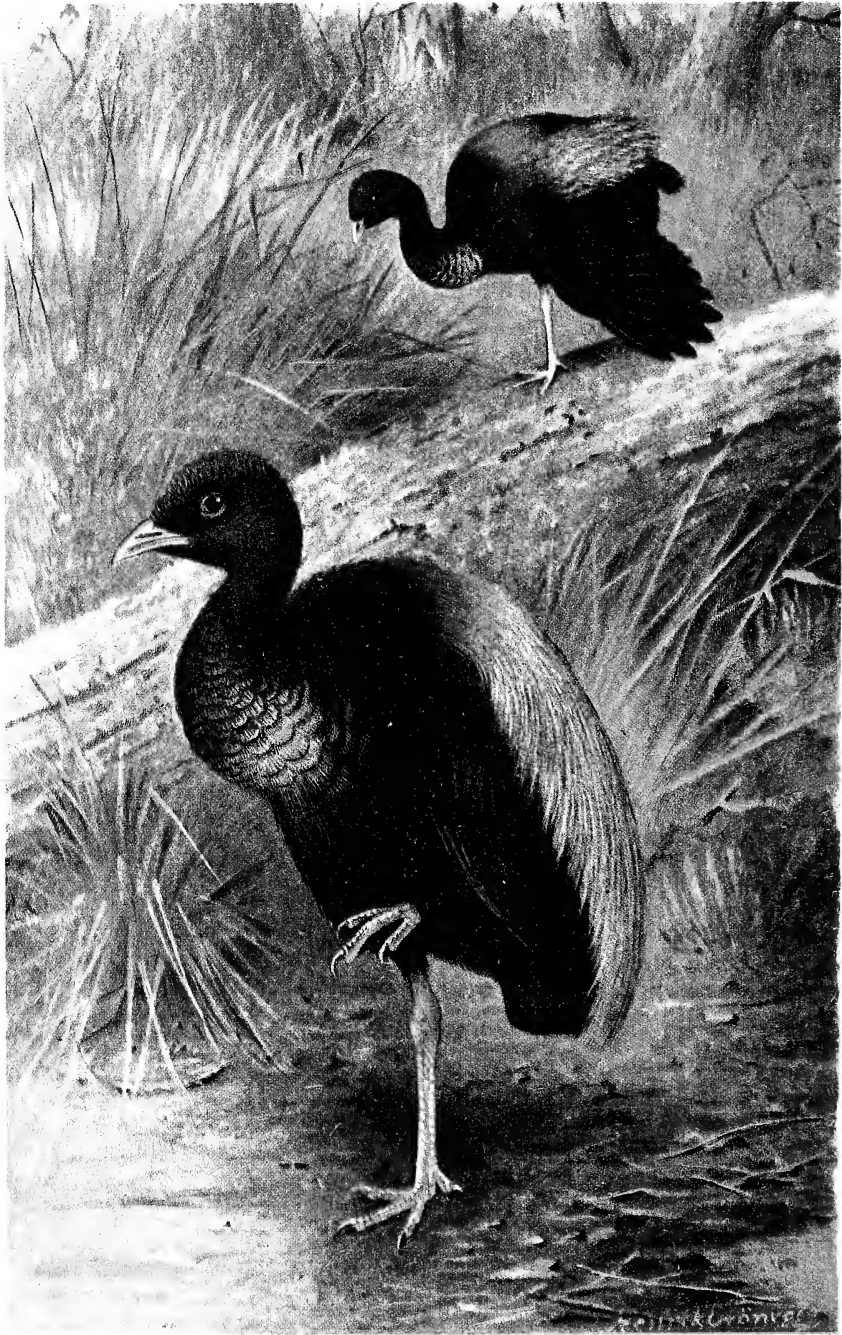
The account of the breeding must be reasonably full so as to afford instruction to our Members, and must appear in the *Avicultural Magazine* before it is published or notified elsewhere. It should describe the plumage of the young, and *be of value as a permanent record of the nesting and general habits of the species*. These points will have great weight when the question of awarding the Medal is under consideration.

In every case the decision of the Committee shall be final.

The Medal will be forwarded to each Member as soon after it shall have been awarded as possible.

The Medal is struck in bronze (but the Committee reserve the right to issue it in *silver* in very special cases) and measures $2\frac{1}{2}$ inches in diameter. It bears on the obverse a representation of two birds with a nest containing eggs, and the words "The Avicultural Society—founded 1894". On the reverse is the following inscription: "Awarded to [*name of recipient*] for rearing the young of [*name of species*], a species not previously bred in captivity in the United Kingdom."

The Council has decided that from January, 1926, any Member of the Society who succeeds in breeding any species of bird for *the first time in Europe*, shall receive a special certificate in addition to the medal which is granted for the breeding of any species for the first time in the British Isles.



1/4

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THE AVICULTURAL MAGAZINE

BEING THE JOURNAL OF
THE AVICULTURAL SOCIETY
FOR THE STUDY OF
FOREIGN & BRITISH BIRDS
IN FREEDOM & CAPTIVITY

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JANUARY, 1926.

THE GREY-WINGED TRUMPETER (*PSOPHIA CREPITANS*)

By Captain S. STOKES, F.Z.S.

Of all the treasures sought out for us since the war in the vast territories of South America, there can be no more charming birds as pets than the Trumpeters. In pre-war days the arrival of a Trumpeter was looked upon as an avicultural event, but lately, owing to the breaking of fresh ground and the enterprise of our dealers and their collectors, they arrive with fair frequency.

In the British Museum *Hand List of Birds* seven species of Trumpeters are mentioned, namely *P. crepitans*, the Grey-winged Trumpeter from British Guiana and Amazona, the subject of Mr. Grönvold's excellent and very characteristic plate; *P. leucoptera*, the White-winged Trumpeter from the Upper Amazons and Peru; *P. viridis*, the Green-winged Trumpeter from the Amazons; and *P. obscura*, the Dusky Trumpeter from the same district, all of which have been imported since the war. *P. napensis* from Ecuador, *P. ochroptera* from Rio Negro and Amazona, and *P. cautatrix* from Bolivia, apparently have not been imported.

They are all of about the same size, standing 18 to 20 inches high, except the White-winged, which is rather larger, and all have a velvety head and neck and some iridescence on the breast. William Beebe, in that most fascinating book: *Our Search for a Wilderness*, says: "These interesting birds have no near relations, but form a sub-order by themselves. They run very swiftly but seldom use their wings, and although they swim well rivers of any size are never crossed. Large

flocks are sometimes met with, but the birds travel more often in small parties. They feed on the ground and roost in tall trees: The voice has many variations, but the sound from which the name is derived is very loud and sonorous, and can be heard at a great distance."

The chief charm of Trumpeters, and a *sine qua non* in buying them, is their absolute tameness, which enables them to be kept at liberty in the garden during the day time; and whereas other tame birds mostly come to you for what they can get, a Trumpeter does so for the mere love of human society. As long as there are people about to be with he is happy. Individuals vary greatly in character; some are frightened of strange dogs, others attack them without hesitation, but usually they are friendly with the animals of the establishment. I have three Trumpeters at Longdon, a true pair of Grey-winged and an odd cock White-wing. They bestow their affections impartially on everyone, but especially love visitors, and will rush up to ladies and children and boom away in their mysterious Trumpeter voice.

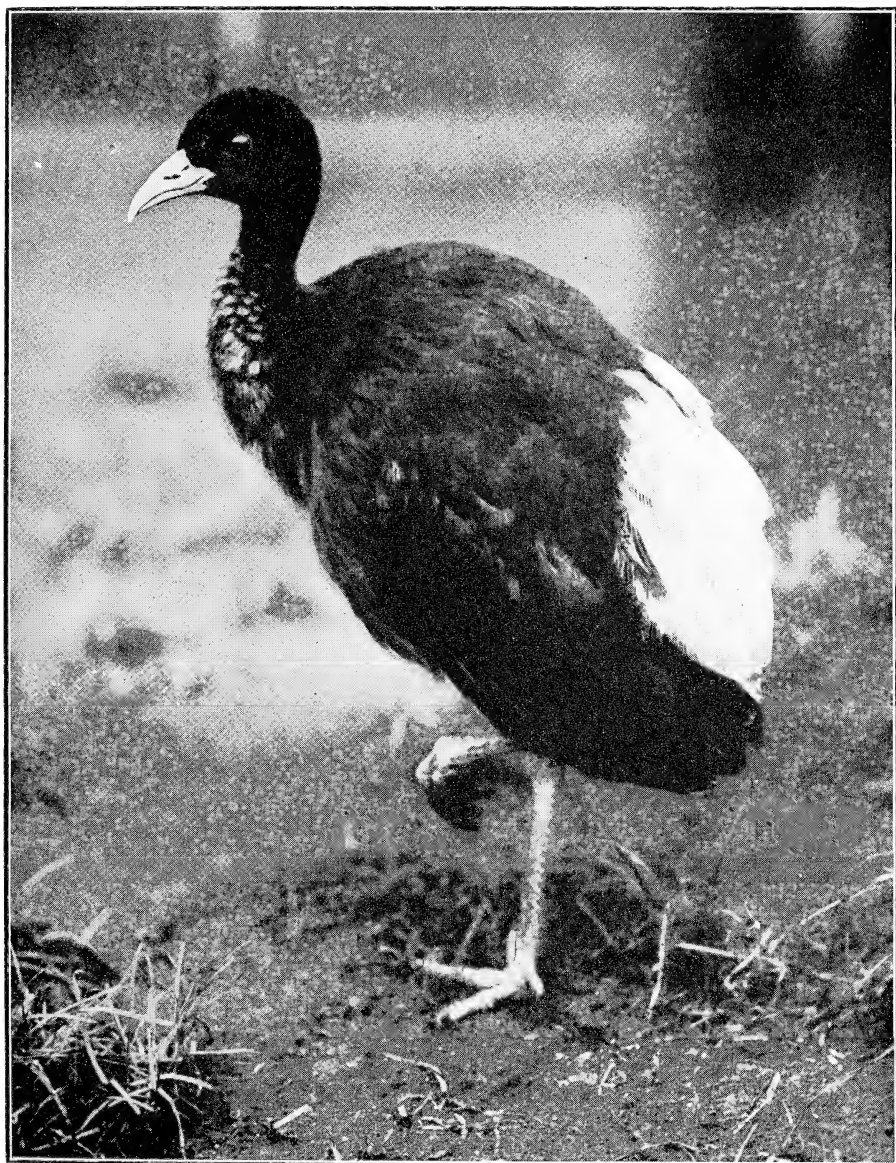
They are into everything, and fear nothing; sometimes they may be found sharing the chauffeur's kitchen fire with the dogs and cats; they will help themselves to damson tart off the lunch table, they will help wash a car or weed a rose-bed.

Owing to this extraordinary tractability, they are very commonly domesticated and kept as pets by the Indians, and Mr. Chapman's collector tells me that they take the eggs and hatch and rear them under hens, so it is probable that many of those we receive are domesticated birds.

Information about their habits in a wild state is scanty, but Beebe says "I made careful inquiry concerning the nesting of the Trumpeter. So-called biographers have credited it with nesting on the ground or in a hole high up a tree, of laying from two to ten or more eggs, which in the words of the describers are white, dirty white, or green."

But two Indians agreed in telling him that they nest high up and lay four or five white eggs, and the colour of the egg is confirmed by one laid last summer by a White-winged Trumpeter at the London Zoo.

As to their keeping, three-quarters of their charm is lost if they are confined in aviaries, neither do I consider them suitable for a small town garden, as birds of this size require a good deal of exercise. They



D. Seth-Smith.

White-winged Trumpeter (*Psophia leucoptera*).

[To face p. 2.

should be full winged if possible, as clipped feathers spoil their appearance, for when excited and pleased they droop their wings and flirt them forward over their backs.

It is advisable to shut them up at night, or they will attempt to roost on the highest roof or tree they can find, and I make a rule to do so when the gardeners and the bird attendant cease work for the day, otherwise they are likely to stray in search of humans. They are not habitual wanderers, but sometimes suddenly take it into their heads to go off on an exploring expedition. One day mine crossed the village green and all three appeared in the bar of the village "pub"!

They seem fairly hardy birds, and would probably do without heat in the winter, but I give them a little for comfort and do not let them out on frosty ground. Their feet are rather delicate, but a covering of granulated peat moss on their shed floor keeps them healthy and also acts as a deodorizer.

As staple food they get soaked and broken chicken biscuit, meat meal, banana and any spare cooked vegetables daily, with an occasional feed of raw meat, and of course they find a good deal of natural food such as worms and slugs. They also like a dead mouse.

Sexual difference seems to consist of a shorter beak and less bold head in the female, and in the case of the Grey-winged a deeper band of sepia brown above the grey. My pair are very affectionate to one another, and constantly call if separated for a few moments. It is to be hoped that some lucky member may be successful in breeding them, thereby furnishing valuable information to science and a Medal to himself.

NOTES FROM RHODESIA

By SYDNEY PORTER

(Continued from p. 318)

Smith's Helmet Shrike (*Prionops talacoma*) is rather a rare bird in Rhodesia, associating in small flocks of about a dozen and seldom being seen more than once in the same place, roaming over the bush veldt in search of its food, which consists mainly of insects, etc.

At a distance it recalls a large Pied Flycatcher more than a Shrike,

in colour it is an arrangement of black and white. The feathers of the head are thick and bristly and form a kind of crest. The most noticeable feature is the bright yellow iris of the eye; whether the brilliancy is accentuated by the sombre surrounding colour I don't know, but it is certainly the most brilliant eye I have ever seen in any bird; even the eye of the Glossy Starling is paled into insignificance when compared to it.

This bird is of rather a confiding nature and will allow of quite close approach. It roams over the wooded veldt and bush veldt.

The lovely Black and Scarlet Weaver Bird (*Pyromelana oryx*) is very common in Rhodesia, where it is known as the "Red Fink". It is rather unique that during the last few years this bird has changed its nesting habits. Prior to the accidental introduction of the Mexican marigold, the Scarlet Weaver always nested in the tall reeds by the sides of ruins or pools, but now it invariably makes its nest in the marigolds which cover nearly all the ant-hills in most districts in Rhodesia, and the plants when dead give the country a most peculiar appearance.

Each clump of marigolds will be about 30 feet in circumference and about 6 feet in height, and is populated by several pairs of birds. It is usually stated that these birds are polygamous, but from my observation they don't appear to be in the district where I was, though of course I may be wrong, but there always seemed to be the same number of cocks on each clump as there were inhabited nests.

The males are always very much in evidence, fussing about on the topmost plants and every now and then bobbing up and down in the air like black and scarlet balls of plush on elastic strings, all the time giving vent with great gusto to their harsh rasping song and making a peculiar clapping noise with their wings.

The males all seem to get on very amicably together, for I have never seen them fight. If one approaches one of the nesting sites the excitement becomes intense, the sombre-coloured females slip away as quietly as possible, while the males all gather together from the surrounding ant-hills, alighting on the nearest one, puffing out their feathers and making a fearful hubbub and retiring to the next nearest ant-hill as one approaches.

The nest, which is one of the most beautiful structures built by a

bird that I have ever seen, is pouch-shaped and is rather difficult to describe. The entrance is at the side ; it is woven of the finest flowering grass, the stalks only being used in the weaving, the heads being left free inside, forming a soft downy lining. The walls of the nest are as thin as a woven fabric and transparent, the bright blue eggs, usually four to six, showing through. The nest is extremely strong, and it is almost impossible to pull it to pieces ; there is always a loop of grass coming from one side of the entrance hole and fastened to a grass stem about 8 inches away. I cannot imagine what it is for unless to add greater security to the nest in a storm ; in one case at least it would have had disastrous results had I not passed by, for I found a young fully fledged Weaver hanging in it in such a position that it would have been impossible to free itself.

The young resemble their mother, who has the usual female Weaver Bird colouring. The breeding season is in the late summer, e.g. February to March ; a few months later the birds seem to disappear and no trace is seen of them until the following spring.

These birds do a great deal of good in feeding upon the seeds of obnoxious weeds.

The smaller Black and Yellow Weaver Bird (*Pyromelana capensis minor*) is not nearly so much in evidence as its scarlet congenor, neither has it forsaken its old nesting haunts in the tall reeds by the river ; I believe this species is polygamous, for I have never seen more than one male in the breeding grounds of several females, nor is it of the same noisy fussy disposition, but the habits of the two birds resemble each other in most other ways, except that this one will approach the environs of human habitations, which its scarlet cousin never does.

The hens of the two species resemble each other except that the species under discussion is slightly more yellow.

There are many members of the beautiful family of Bee-eaters found in Rhodesia, comprising the most lovely of African birds. It has not been my luck to see more than four species, namely, the well-known European Bee-eater (*Merops apiaster*), the Little Bee-eater (*Melittophagus meridionalis*), the White-fronted Bee-eater (*Melittophagus bullockoides*), and the exquisite Carmine-throated Bee-eater (*Merops nubicoides*).

The European species, as everyone knows, is a migrant ; it associates in flocks, passing over the country in one place one day and another the next, except when they are breeding.

It is a bird that never fails to attract attention owing to its brilliant colouring.

A flock of these birds will arrive in a certain locality one day, spending their time between sitting on one special tree and hawking for winged insects in the same manner as a Swallow—in fact, their South African name is the “Summer Swallow”. Their hunting, nesting, and departure is very systematic. These birds nest in South Africa, burrowing into a perpendicular bank to the depth of several feet and then depositing their fine round glossy white eggs. I have seen no evidence of their nesting in Rhodesia. They are very much in evidence in the spring and late autumn, when large flocks pass over, coming from Europe and then returning.

Sometimes in a flock of this species will be seen a solitary example of the Carmine-throated Bee-eater, a wonderful bird whose prevailing colour is a peculiar shade of carmine ; the head is pale green, the rump and tail-coverts blue, also the under tail-coverts. The under parts are a pinker shade of carmine, the two central tail-feathers are elongated to about twice the length of the others, the end portion being narrow and black in colour ; its habits are similar to those of the European species, and although it is migratory it does not go to Europe.

The beautiful Little Bee-eater, so very common in Rhodesia, is a resident, and is only half the size of the European. The prevailing colour is rich glossy green above, the lores black, also the ear-coverts, the eyebrows turquoise blue, the throat bright yellow bordered by a line of sky blue, below that is a patch of black fading into rich russet brown on the breast, the under parts being light yellowish brown, the two central tail-feathers bluish green, and the rest light brown bordered by a black band and tipped with white. The flight-feathers are similarly coloured. The long curved bill is black and also the tiny feet. It is about 7 inches in length, the tail taking up nearly half that length.

It is a very confiding little bird and will allow a very close approach. It will sit on some slender twig in a conspicuous position for hours,

sallying forth every few minutes to capture a winged insect as it passes ; if the insect is small there is a click of the beak, a movement of the throat, and it is swallowed before the bird returns to its perch, but if the capture is a large one, such as a beetle or butterfly, it will be brought back to the post of vantage, battered, and knocked on the twig until it is in a fit condition for swallowing. When the bird is on the twig it is always in constant motion, the long tail being jerked up and down and the head turned from side to side the whole time.

The Little Bee-eater frequents the wooded parts of rivers where all manner of insects are abundant, upon which it feeds. Sometimes I have seen it quite close to the homesteads, but one never sees it out on the veldt or far from water.

It nests in the banks of rivers and streams in much the same way as a Kingfisher.

One pair I had under observation had their nest only 18 inches above the water, with the consequence that the nest was flooded with the first rain of the season and the young no doubt drowned.

The other Bee-eater is the White-fronted, another beautiful creature, whose prevailing colours are green, scarlet, deep blue, white, and yellowish brown. I have seen flocks of these birds by the Hunyani River hawking insects over the water. Their call note exactly resembles the croak of a frog. I believe they are residents.

The Black-capped Bulbul (*Pycnonotus layardi*) is always in evidence around the homesteads ; cheery and confiding in its demeanour, it is always welcomed by the bird-lover but, alas, not by the fruit-grower. Its ringing notes are the first to be heard in the morning and they somewhat resemble those of the English Blackbird, but its song is not as continuous.

This Bulbul seems to keep in small family parties and appears to never wander very far from its own particular area.

It is about 8 inches in length, the head-crest and throat black, the under parts silky greyish white, the upper parts, wings, and tail brownish grey, the under tail-coverts bright sulphur yellow.

The food consists principally of fruit, supplemented by insects.

The beautiful little Green White-eye (*Zosterops virens*) is fairly common throughout the year in Rhodesia ; it is seen in small parties

in the wooded parts and around kopjes during the summer, but in the winter it associates in flocks and haunts the environs of the homesteads, partly to feed upon the fruit ; it is especially partial to guavas and a fruit which is called a mulberry, but is quite unlike the English mulberry, and it also feeds upon the insects which infest the cultivated plants. I have watched them feed upon the " scale " insects which infest the citron-trees and which are a great pest to fruit-growers. The White-eyes are said to feed upon the nectar of flowers, but I have never seen this species doing so.

The very embodiment of energy, the Green White-eye is never for a moment still ; consorting in small flocks, they make a systematic search of the fruit-trees, passing from one to another during the whole of the day.

These little birds, which seem to resemble both the Tits and the Warblers, are of a beautiful pale yellowish green colour, lighter below than above ; the throat is a pale sulphur yellow. Around the eye is the characteristic ring of white.

I have seen some examples with a rich orange-coloured throat, but whether this is merely a variation from the true type or a different species I don't know. I believe that this species has been bred in captivity in England.

The Verreaux's Glossy Starling (*Pholidauges verreauxi*) is one of the most beautiful of the Starling tribe, if not the most beautiful ; its beauty is of a simpler kind to that of the Rollers or other gaudy birds of many colours. The whole upper parts, including the wings and tail, also the throat, are glittering metallic red, the under parts white. In stuffed skins the colours fade to a dull amethyst red, hence the name Amethyst Starling, but in the living bird there is no trace of that colour.

It is a wonderful sight to see a flock of these birds feeding upon the mulberry-trees in the bright sunshine, their plumage glistening and flashing in the sun. The flocks are usually composed either entirely of males or females, but in the spring and summer the flocks break up and the birds pair off for the nesting season and distribute themselves all over the country. The nest is built in a hole in a tree, usually in a dead one.

The female is quite unlike the male, being of a brownish colour, the underneath being creamy white streaked with brown ; she rather resembles a Thrush.

In the breeding season they are rather shy and difficult to approach, but this is not so in the winter time.

Other species of Glossy Starlings are extremely numerous in Rhodesia, moving about the country in vast flocks after the breeding season. The Lesser Red-shouldered Glossy Starling (*Lamprocolius phænicopterus bispecularis*) is the most familiar and is seen in flocks of thousands at the end of the summer (March and April). In colour it is brilliant oil green, the lores velvety black, the ear-coverts rich purple, and the flanks greenish purple, the secondary and median wing-coverts each tipped with a dark blue spot, the lesser wing-coverts a mixture of brilliant bronzed purple-red, the under wing-coverts bright purple, the beak and feet black, the iris brilliant yellow.

To see a flock of these birds turning and twisting in the brilliant sunlight is a sight to be remembered ; one moment they appear black, then, as the rays of light catch them at right-angles, their wonderful colours are reflected with marvellous brilliance.

Once when staying with a friend I saw a sight that would bring joy to any bird-lover ; not far from the house was a large ant-hill, and on that particular evening the flying ants were coming out, and over the nest was such a bevy of beauty that is seldom seen in a day's march. Hundreds of Glossy Starlings of three or four kinds, several species of Rollers, Bee-eaters, Shrikes, Swallows, Martins, Drongos, etc., all circling round together in a screaming flock, feeding upon the ants as they flew into the air. Some time afterwards I saw a similar sight, but in this case the birds were on the ground. The ants were a small tree species and the flying queens were issuing from a small hole in the ground at the base of a large M'harsh tree ; all round was a crowd composed of hundreds of birds, Glossy Starlings predominating, including many in the juvenile plumage of a mixture of cinnamon brown and green ; the others consisted of White-crowned Bush Shrikes, Bennet's Woodpeckers, Moselikatze's Rollers, Drongos and others that I have forgotten. There was no squabbling or disturbances, the birds came and took the insects in turn, for there were plenty to go round.

The Pied Crow (*Corvus scapulatus*) is common and equally distributed over Rhodesia ; it frequents the cultivated lands and the outskirts of the towns, evincing a partiality for garbage dumps and such like places ; it is usually in evidence by the side of railway lines, perching on the telegraph poles.

This bird is extremely garrulous and its raucous voice, which it can inflect to a greater degree than most Crows, can be heard from a great distance ; on the wing this Crow seems especially loquacious.

The Pied Crow is seldom seen in flocks but in small parties of from four to six. It is somewhat longer than the European Crow but is the same glossy black colour with a broad white band across the breast and white markings on the back.

The nest is built in a tall tree and is of the usual type. The food consists of all manner of insects, carrion, frogs, lizards, etc.

The Black Crow (*Corvus capensis*) very much resembles the foregoing in habits, etc., but in colour is wholly black. Both species do a great deal of good owing to the fact that they consume large quantities of obnoxious insects ; they are experts in the art of digging for grubs and often in a newly planted field their efforts are mistaken and they are accused of taking the seed. The only time that they are troublesome is when the mealie cobs are getting ripe, then parties will invade the lands and feed upon the milky grain, but that is small payment for the beneficial work that they do at other times of the year, but I am afraid very few people see this from a logical point of view and many hundreds fall victims to the unenlightened gunner.

I had two nestling Black Crows given to me, a male and female, which I reared upon a mixture of mealie meal, raw meat, milk, and eggs that had been sat upon for a fortnight ! They thrived apace and grew into the most amusing pets I have ever had ; absolutely without fear, they would follow at one's heels or perch on one's shoulder. Every morning one of them, the hen, would come into my hut, hop on to the bed and endeavour to pull the bed-clothes off, thinking no doubt that humans should rise at the same time as the avian world.

They loathed the niggers and would go for them with beak and claw. This was not because of any inborn aversion, but because the niggers teased them.

They absolutely refused to sleep outside and would persist in roosting on the highest point in any available bedroom, knocking over bottles, flower vases, etc., and in that way becoming a nuisance, so it was decided by the others (and, alas, I had to reluctantly agree) that the Crows must be got rid of, so one day they were taken and released some miles out on the veldt, but, alas, when passing the spot where they were released some days after, their poor mangled bodies were found, a mute testimony of the fate that had befallen them.

There was a very noticeable difference between the two birds, both in disposition and size. The hen was much more inquisitive and familiar than the cock; she was also much slimmer, with a smaller head and more tapering beak, and longer in the leg.

(To be continued.)

BUDGERIGARS AT LIBERTY

By the MARQUESS OF TAVISTOCK

Few foreign birds are more delightful at liberty than this common little Parrakeet and, destructive as it is to growing shrubs in an aviary, it has the recommendation, when free, of being innocuous to fruit, buds, and blossom, and entirely blameless in its habits. Many attempts have been made with Budgerigars at liberty, and nearly all have ended in failure. Sometimes the birds have stayed fairly well at first and have even bred, but on the approach of autumn their numbers have dwindled and as winter advanced they have entirely disappeared. After a number of unsuccessful ventures, however, I have at last discovered the way to enjoy Budgerigars flying loose in one's garden during five or six months of the year.

The first and, strange to say, about the most difficult step, is to secure a stock of birds hardy enough to live and breed at liberty without suffering from chills and egg-binding. You *must* buy from a real outdoor-aviary where the inmates are used to sitting, at times, in the rain. Budgerigars can be turned out after spending a few weeks in their new home, but it is preferable to buy your birds in autumn and keep them in an aviary until the leaves are getting thick on the trees the following spring. By that time they will have grown

thoroughly used to their surroundings and the losses from straying will be almost nil. It is not a bad plan to feed the birds during the winter inside the aviary shelter and to teach them to go into the shelter from the flight through a fairly small door not more than a foot square. Before the Budgerigars are released an ample supply of artificial nest-boxes should be fixed up in adjacent trees. These boxes should be about 18 inches deep and made climbable inside by tacking a strip of wire-netting from the entrance-hole to the bottom, which should of course be concave. The entrance-hole should be $1\frac{1}{2}$ inches in diameter with a strip of metal round the edge to prevent the birds biting it larger and so allowing Starlings to take possession. Immediately below the entrance there should be some small projection for the birds to cling to, but apart from this, as little foothold as possible should be provided for a climbing weasel, which can be a dangerous enemy to sitting hens and their broods, and should be circumvented by a little ingenuity in the construction and fixing of the nest. Budgerigars take readily to an artificial box of an attractive pattern, i.e. nice and deep with a small entrance-hole, and it is most undesirable for them to start breeding in natural hollows where it is impossible to look in and find out what is going on when the time comes for recapturing the stock in autumn.

As soon as the spring foliage is sufficiently thick to afford some protection from Owls, a piece of wire-netting should be taken off the top of the aviary flight as nearly as possible above the hole leading into the shelter where the food is kept. Hungry birds returning to the top of the aviary after a fly in the garden are thus easily able to find their way home again.

Directly the first broods of young are seen to be feeding themselves they must be caught up and kept in an aviary until the following spring, by which time they too will have grown attached to the place and will settle down to breed. The juvenile Budgerigar is of a most venturesome disposition. As soon as he can feed himself he is off to see the world, and if you imagine that you can leave your youngsters out until the winter catch-up, you will be grievously disappointed and find nothing left but your original old birds diminished by such casualties as the summer may have inflicted on them. There are two

ways of securing young Budgerigars. Either you can accustom the adults to using a trap feeding-tray on which birds can be caught by pulling a long string from behind a place of concealment (a good pair of field-glasses enables one easily to distinguish birds in immature plumage with their barred foreheads and duller markings), or it is possible to capture young birds in the aviary flight by making the opening in the top of the wire-netting comparatively small and putting seed just below it as well as inside the shelter. Young and old birds find their way in to feed, but the former do not readily find their way out again the first time or two, and a person walking up can cover the hole and secure them while they are flying round looking for the exit. When captured they should be put, if possible, in a compartment of the winter aviary, for if taken right away and wintered out of sight of the garden which is to be their next summer's home they will behave like freshly imported birds when let out in the spring and probably stray and be lost. Young Budgerigars are rather delicate when first caught up. They should be fed on soaked and not dry Canary seed and be shut up in a snug shelter every night and on wet days. One or two old birds in the same aviary help them to settle down and not fret.

It is most important, not only in the case of Budgerigars but with all perching birds kept at liberty, that they should have undisturbed access to a constant supply of food. Letting the seed run out or keeping the birds away from their food through people working close to the aviary all day is a sure way of causing loss by straying.

On 1st October all the nest-boxes should be examined. Any containing eggs should be re-visited at night when the hen will be sitting. The entrance-holes should first be quietly and quickly blocked up and birds and nests taken down and put in a compartment of the wintering aviary—the young birds' quarters will do. An especially devoted mother will occasionally go on sitting and hatch and rear her brood if the nest be fixed up in the aviary shelter, but as a rule the hen will desert, in which case the eggs should be thrown away and the nest fixed up in the tree where it was before. Some nests will probably be found containing young birds. As soon as the youngest and last

of these broods have flown and been captured by the method already described, another search should be made for hens with eggs, which can be caught up at night, as already described. Then, when these have been secured, all the old cocks and such hens as are neither sitting nor feeding young can be trapped at their feeding-place by one of a number of simple devices that anyone can contrive. There is, of course, no objection to catching up at an earlier date cocks whose mates have been made prisoners the first week of October, provided they can be recognized with certainty and distinguished from the fathers of families still in the nest. It is not desirable to leave one's breeding Budgerigars out when the trees are getting bare of leaf, as they more readily fall a prey to Owls and lack of cover makes them restless and inclined to wander. No fear, however, need be entertained of nesting pairs straying and getting shot earlier in the season. They are excellent stayers then and never leave their owner's garden. On fine mornings and evenings they may rise to a great height and fly round and round as though preparing for a long journey, but a few moments later they will swoop down again to the trees from which they started and continue fussing and chattering round their nests.

These rules of management may sound elaborate, but they are really very simple, and the slight amount of trouble is amply repaid by the beauty of the lively little birds in a summer garden. Undoubtedly the failure with Budgerigars at liberty in the past has been due to four main causes :—(1) Delicate indoor-bred stock which, when they vanish, are thought to have strayed or been killed, whereas in reality they have just died of chills and egg-binding. (2) Release of birds not thoroughly used to their surroundings. (3) Failure to catch up young as soon as they feed themselves. (4) Attempt to winter adults at liberty when there is insufficient cover and the weather is unfavourable to moulting- and laying-birds.

SHORT-TAILED PARROTS

By E. MAUD KNOBEL

Amongst a consignment of birds and mammals that came in to Chapman's, 17 Tottenham Court Road, during November there were three of the Short-tailed Parrots (*Pachynus brachyurus*). These little Parrots are not often imported, and I only remember having seen one once before, which was also at Chapman's and I believe went to the late Mrs. Dalton-Burgess; but I think I am right in saying that Rogers, of Liverpool, has had them for sale from time to time, but they are by no means common. These pretty little Parrots look very much like Miniature Amazon Parrots, to which they are supposed to be closely allied. They are about 8 inches in size and are green all over with the exception of a red spot on the top of the shoulder and a red band across the tail, which is extremely short. The wing-feathers are green, but each feather is edged with a small border of yellowish green. There was one male and two females, and according to the British Museum Catalogue the sexes are alike, but I noticed the male differed slightly in various ways. He had a few flicks of reddish feathers down the breast, his beak was narrower and longer than that of the females, both of which had broader beaks, and the iris of the male, especially when dilated, went to a brilliant orange-red whereas those of the females remained brown. He looked more alert than either of the females and had more to say for himself, whereas they were practically dumb. He looked as if he might have become a talker if taken in hand. For their size the beak and mouth is large, and on examining them more closely I discovered that they have a tongue unlike that of any other Parrot. Instead of being round it is flat and large, flesh-colour in appearance with a black edge. One cannot help wondering what these small Parrots feed on in their wild state for they do not seem constructed to crack small seeds, but certain it is that they belong to a genus entirely by themselves.

According to the British Museum *Hand List* this species occurs in Upper Amazonia and Ecuador.

FOREIGN BIRDS AT PAIGNTON

The Paignton and District Fanciers' Association are to be heartily congratulated upon the success of their show held on 24th and 25th November, 1925. So far as foreign birds are concerned, surely never before has such a choice array been seen at any provincial town. Paignton and district is fast becoming famous as a centre of aviculture, and it certainly has an advantage over the eastern and northern districts in its milder climate.

Space will not permit of our giving here a systematic list of the entries and awards. It must suffice if I mention that there were nineteen classes for foreign birds alone, and an entry of no less than 155. The condition of the birds was first-rate, and as for quality one has seldom seen a rarer lot at any show; in fact, there were here, in this comparatively small Devonshire town, many species that had never been seen on the show-bench before. The fact that Mr. Herbert Whitley's unsurpassed collection has its home within a short distance of the town of Paignton of course accounts to a great extent for this, but he did not by any means have it all to himself. The Marquess of Tavistock sent a splendid team all the way from Havant, and thus we had the cream of the two justly celebrated collections rivalling one another and helping to form the finest provincial show of foreign birds that there has ever been. Captain Rattigan sent a very nice collection of Grassfinches and Waxbills, while Miss Blackburn, Mr. Longlands, Mr. Chudleigh, and Mrs. Caunter helped with their birds.

Perhaps the greatest rarity in the show was Lord Tavistock's fine old Guilding's Amazon Parrot; while his two splendid Black Cockatoos and Mr. Whitley's Spix Macaw and Dwarf and Citron-crested Cockatoos formed a grand lot. Amongst the rare Parrakeets, Mr. Whitley showed a most perfect Alexandra and a Stanley, while Lord Tavistock sent a lovely pair of Malabars, a Yellow-bellied, and a Layard's. Mr. Whitley exhibited a very perfect specimen of the Brown-necked *Pæocephalus* and an equally good example of the extremely rare *Pæocephalus rufiventris*, not to mention three female *Eclectus* of different species, one of which was probably *E. cornelia*. Among the rarer Grassfinches, Mr. Whitley showed a first-rate pair of Pintail Nonpareils, while Captain

Rattigan showed a pair of Blue-faced Parrot-finches, the class also containing a Parson-finch and a Sydney Waxbill, both uncommon nowadays, not to mention several very good Gouldians. A very fine pair of Dinemelli Weavers and an Allied Saltator must not be forgotten, nor must I omit Mr. Whitley's Bengal Pitta, Amethyst Starling, and Verditer Flycatcher, nor a very fine Glossy Starling with white eyes of which I do not know the species.

The last class, which is for those that cannot find accommodation elsewhere, is generally one of the best classes in a show of foreign birds, and that at the Paignton show was no exception to the general rule, every bird was worthy of a first prize, and the judging was no easy task ; all belonged to Mr. Whitley. A perfect Abyssinian Roller ; an equally good Green Cassique (*Ostinops viridis*), a species never before shown, though represented at the Zoological Gardens on rare occasions ; a Black Cuckoo, probably *Crotophaga sulcirostris* ; a Violaceous Jay, a Beechey Jay, a Piapec, a Piping Crow, and a Long-tailed Glossy Starling : a wonderful collection.

D. S-S.

A PAIR OF BULLFINCHES

By CATHARINE CURREY.

They have lived with us for many years, and know their home so well that they have flown about loose in the garden—with an orchard adjoining, beloved of Bullies !—and have never failed to return to their home, coming at my whistle. Every spring the hen lays eggs in a little nest-basket in a sheltered corner of their cage, every year the eggs are thrown out, I think by the hen, and broken, so they have no progeny, bearing out what I have heard of them, that they never breed in confinement. I do not suppose this applies to Bullfinches in a large aviary. I have no feeling of regret when I remove the pretty blue speckled eggs, as my object in bird-keeping has been limited to a study of the bird itself, not the propagation of species.

In summer, and on fine days at other seasons, the little pair spend their days in a roomy wire enclosure on the lawn, where there are branches, turf underfoot, and a shallow flower-pot saucer to bathe in. Here they fly and sing and hide among the branches, and bathe,

and no doubt imagine they are in the green wood, and at sunset they go into their house-cage, which stands at the entrance to the enclosure, where they roost for the night, and are taken into the house out of the way of cats, rats, weasels, and other foes. Every morning they call to me to put them out or, if the weather is very cold or foggy, to open their cage door and let them loose in the room. In winter they only go out for an hour or two in the sunshine to enjoy a good fly round and see their wild brethren who come to call and flaunt their superior liberty.

When a wild Bullfinch comes to call and to flirt with my tame hen it is most curious how cross she is afterwards with her mate and how subdued he becomes. It is as if she said: "That one is handsomer than you, and younger!" But my little pair are very devoted, and if the hen flies out of the room to hide, as is her wont, somewhere in the house where she thinks she cannot be found, he calls for her with his most plaintive little note. He is very tame and comes on to the breakfast table for brown bread-crumbs.

On their cage in a south window they have a large pine bough, on which they spend their day nibbling the pine-needles, the turpentine of which I think keeps away asthma and bronchial troubles, to which birds are subject in winter. They know my voice, and go into their house-cage at once when I bid them go to roost, for if they remain loose when the lights come they get so dazzled and frightened that they lose their way to their cage.

One afternoon lately I thought they were lost, for when daylight began to decline, I could not find them on their branch, nor were they in their cage. I searched for them everywhere and called, but there was no answering whistle. I then proceeded to take the branch down from the window, but no birds were to be seen on it, and before putting it out of doors, I laid it on a stool, and it fell to the floor. Out flew the Bullies unhurt, the hen straight into their cage, the cock to take his evening flight before following her to roost. They must have been hiding in the thickest cluster of pine-needles and clinging on very tight! The window they are in is often opened, but they never fly out; their bough has a magic attraction for them!

They are charming pets and companions, and both sing sweet little songs, almost exactly alike, the hen perhaps a trifle louder. But then she is the master, a fact of which she is quite aware!

MR. WALTER GOODFELLOW'S COLLECTION

Mr. Walter Goodfellow, the well-known explorer and collector, arrived in London on 19th November, 1925, from a collecting expedition to New Guinea and brought with him a valuable lot of living birds, mostly from South-East New Guinea, but a few collected in the Malay States on his way home.

Amongst the collection were twenty-seven Birds of Paradise, including Princess Stephanie's (*Astrarchia stephanice*), Count Raggi's (*Paradisea raggiana*), Lesser Superb (*Lophorhina superba minor*), Lawe's Six-plumed (*Parotia secpennis lawesi*), Count Rudolph's (*Paradisornis rudolfi*), Hunstein's Magnificent (*Diphyllodes magnifica hunsteini*), and Manucodes (*Phonygama jamesi* and *Manucodia atra*).

Rare Doves included the Superb Fruit Pigeon (*Ptilopus superbus*), Black-capped Fruit Pigeon (*P. melanocephala*), Gestro Fruit Pigeons (*P. gestroi*), Magnificent Fruit Pigeons (*Megaloprepia magnifica*), and two species of *Phlogoenas*, *P. rufigula* and ? *P. beccarii*. Amongst the Parrots were two *Geoffroyus aruensis*, a Stella Lorikeet (*Charmosyna stellæ*), some Mitchell's Lorikeets (*Trichoglossus mitchelli*), and a Green-winged King Parrakeet (*Aprosmictus chloropterus*). The collection also included a Blue-tailed Pitta (*Eucichla cyanura*), a very rare Barn Owl (*Tyto arfaki*), a Sclater's Crowned Pigeon (*Goura sclateri*), and two Black-headed Cat Birds (*Ælurædus melanocephala*).

D. S-S.

A LIST OF COLOURED PLATES

Our member, Dr. E. Hopkinson, has spent a great part of his leave at home during the past summer in preparing a complete list of all of the coloured plates that have appeared in the AVICULTURAL MAGAZINE since its commencement in 1894 to the end of 1925, and in *Bird Notes* from its beginning (1901) to its termination. This list forms a most valuable index to coloured figures of more than two hundred species of birds, most of which have been drawn from life, and it will certainly be of great value to aviculturists and ornithologists generally.

It has been decided to publish this as a separate pamphlet, which we would advise our members to have bound at the end of the 1925

volume. It is proposed to issue it immediately and to offer it to members of the society at 2s. 6d. per copy, post free, from our publishers, Messrs. Stephen Austin and Sons, Fore Street, Hertford.

We hope that all of our members will order a copy of this List and thus show their gratitude to Dr. Hopkinson for the trouble he has taken for the benefit of the Society.

CORRESPONDENCE

A SECOND EGG-TOOTH IN YOUNG PIGEONS

SIR,—I read with the greatest interest the remarks in the November Magazine on a pair of young Red Mountain Doves in Mr. Whitley's aviaries, as confirming and amplifying my observations made when rearing the young of the Partridge Bronzewing Pigeon in 1908. It will be remembered that I then recorded the presence of an egg-tooth on *both* mandibles and that I remarked that while I was not aware of any previous record of an egg-tooth on the lower mandible in any bird, it was evidently not uncommon among the Pigeons as I had also found it present in the newly-hatched young of the Brush Bronzewing and it was discernible in young Picui and Diamond Doves, but that I had not found it in *Columba* or *Turtur* (*Streptopelia*). I did not then enlarge on the subject (which will be found in AVICULTURAL MAGAZINE, New Series, VI, pp 341-2, 1908), as I had submitted a young Partridge Bronzewing to Mr. Pycraft, who had promised to describe the specimen, but I believe he never did so. I asked our members to examine the newly-hatched young of any Doves or Pigeons they might breed in their aviaries and to kindly report on this interesting subject, and Mr. Whitley's discoveries seems to be the first made since.

T. H. NEWMAN.

NESTING OF THE MEXICAN ROSEFINCH (*CARPODACUS MEXICANUS*)

SIR,—I was much interested in the account in the November Magazine of the nesting of the above bird, which is also known as the "Blood-stained Finch". A fine cock of this species is the "father"

of my small collection, having been in residence since 1912 or 1913. I may say he has just about finished his moult, and looks good for another few years. I bought him, apparently adult, from an Edinburgh dealer sometime within the period mentioned. I was not then able to identify the bird, but knew it was not a "Red-headed Finch" as described. After a good many fruitless inquiries it was finally run to earth in the pages of Butler's *Foreign Birds for Cage and Aviary* (p. 110), and I was able to confirm the identification at the London Zoo a year or two later. The colour arrangement is as described by Mr. Shore-Baily, though I should have been inclined to describe the body colour as rather a purple-brown or plum colour, while the patches on the forehead, throat and rump seem scarcely so bright as "brick-red". In fact the name "blood-stained" seems pretty near the mark. No doubt the tints vary considerably in captive birds. Certainly the coloured areas of the specimen I saw in the Small Bird House in the Zoo had faded to a brassy yellow, much as one sometimes sees in a caged Redpoll. I have always found this bird a most interesting one, and in his younger days he had a fine exuberant gush of ringing song—too ringing indeed on an early spring morning for one whose bedroom window looked out on the top of the aviary! He was very ardent and mercurial in temperament, and his jerky attentions to any female passer-by were very amusing. I have never seen a hen of this species, but we have had two different sorts of hybrids from him at various times. The female parent of the first was a Canary, and the occurrence was recorded in *Bird Notes* for 1913. Unfortunately, from the hybrid-breeder's point of view, Canary crosses were not eligible for a Medal! (Query: as all the more obvious Canary crosses have now been obtained, would it not be encouraging to award a Medal for a new one—assuming that this is not the rule at present?) The offspring, a cock, was exhibited at the L.C.B.A. Show the same year, and was described in the December *Bird Notes*. It is a very interesting fact that the Canary mother of this bird was paired with a Twite, her family comprising four Twite hybrids and the *rara avis* mentioned. There was absolutely no doubt about this. The young bird was a Rosefinch to the life, in its long, Yorkshire Canary build, its jerky movements, and its colour arrangement. The

red tints were, however, replaced by the yellow of the Canary. Though unusual, it is not unprecedented, I believe, to obtain a clutch the eggs of which have been fertilized by more than one male.

In subsequent years I have had hybrids from the Rosefinch and Greenfinch hens on several occasions ; in fact I felt that I could always get this cross by turning in a hen "Greenie". Though it is some years now since this happened, a pair of the offspring, a cock and a hen, are still flying in the aviary. The cock has much of his father's ways and song, and succeeded him as a disturber of the peace in the early spring mornings, though the flight of years is toning down even his exuberance ! So far as I can remember no record was made of this breeding, as a Medal had been awarded a year or two previously to a Foreign Bird Club member, a Mr. Wade, I believe, for a similar hybrid. In his case I think the cross was got the other way about.

As to the breeding of the Rosefinches themselves, I fear Mr. Shore-Baily is not after all the first in the field. According to *Bird Notes* of June, 1914, Dr. Lovell Keays succeeded in breeding them. This gentlemen had an interesting account of the birds in that Magazine for June, 1915. There is also to be found in "Records of Birds which have been bred in Captivity", by Dr. E. Hopkinson, which appeared serially in the magazine, the following : 1st record, Teschemaker, 1910, F.B.C. Medal, B.N. 1910, 363. Zoo., 1912, 1913.

It appears this bird is the "House Finch" of the Americans. It is described as very common in parts of the Western States, more particularly southwards, and "exhibits a predilection for the neighbourhood of houses almost as strong as that of the English Sparrow. So confiding has the bird become that it places its nest in any crack or cranny". It is rather curious that our rarity should rank as something like a Sparrow in other parts of the world !

M. R. TOMLINSON.

ROCK PEPLAR PARRAKEETS. AN OFFER

SIR,—Owing to lack of room I am disposing of an acclimatized outdoor aviary pair of Rock Peplar Parrakeets. I shall be pleased to give them to any member of the Avicultural Society who is prepared to allow the birds the aviary accommodation to which they have

been accustomed, and which I regard as essential to the welfare of this species, which does not usually survive many years in captivity. The birds have been kept in a moveable aviary about 24 feet by 8 feet by 8 feet. The flight consists of a rectangular enclosure of wire netting on a wooden framework, with a closed shelter shed, about 3 ft. 6 ins. deep, from back to front, at one end. The aviary is moved on to fresh turf once a year with the aid of wooden rollers.

The hen of this pair is tame, and nested in 1924 and last summer. The cock is trained to fly at liberty out of the breeding season, and return to a small aviary adjoining the hen's at night—a necessary arrangement to prevent him from being devoured by owls. He never goes any distance from home, so the risk of his being shot is very small. He is not mischevious in the garden, and is extremely beautiful on the wing, the Rock Peplar being unsurpassed by any bird I know for grace and power when in flight.

TAVISTOCK.

OUR NEW COVER DESIGN

Some months before his death our late president, Mr. Hubert Astley, told the present Editor that as the block of the cover design was nearly worn out he would be pleased to defray the cost of a new drawing and block, but since his death it has occurred to some of his friends that a drawing from his own gifted pen would be most desirable. A very clever ink drawing was found amongst the numerous drawings that he left, and Mrs. Astley has most kindly allowed this to be used for our cover, and it appears for the first time with the present number.

THE CRYSTAL PALACE SHOW

The annual Cage Bird Show at the Crystal Palace will be held from the 4th to 6th February, and the section for foreign birds should be very fine. Budgerigars are now so popular and the varieties of colour so numerous, that these are to be in a section of their own, with no less than nine classes. In addition, there are to be twenty-eight classes for

other foreign birds, and considering the number of rarities that have been imported of late, these should produce many that have not been seen on the show-bench before.

The Show is held under the auspices of the Dulwich and Peckham Cage Bird Society, and the Show Manager is Mr. A. W. Smith, 100 Perry Rise, Forest Hill, S.E.23.

THE SOCIETY'S MEDAL

It is proposed to award the medal to :—

Mr. W. E. Suggitt, for breeding the Garrulous Honey-eater.

Mr. W. Lewis, for breeding the Orange-flanked Parrakeet and the Abyssinian Lovebird.

Accounts have appeared in the November, 1925, number. If any member or reader should know of a previous instance of either of these species being bred in captivity will they kindly communicate at once with the Hon. Secretary.

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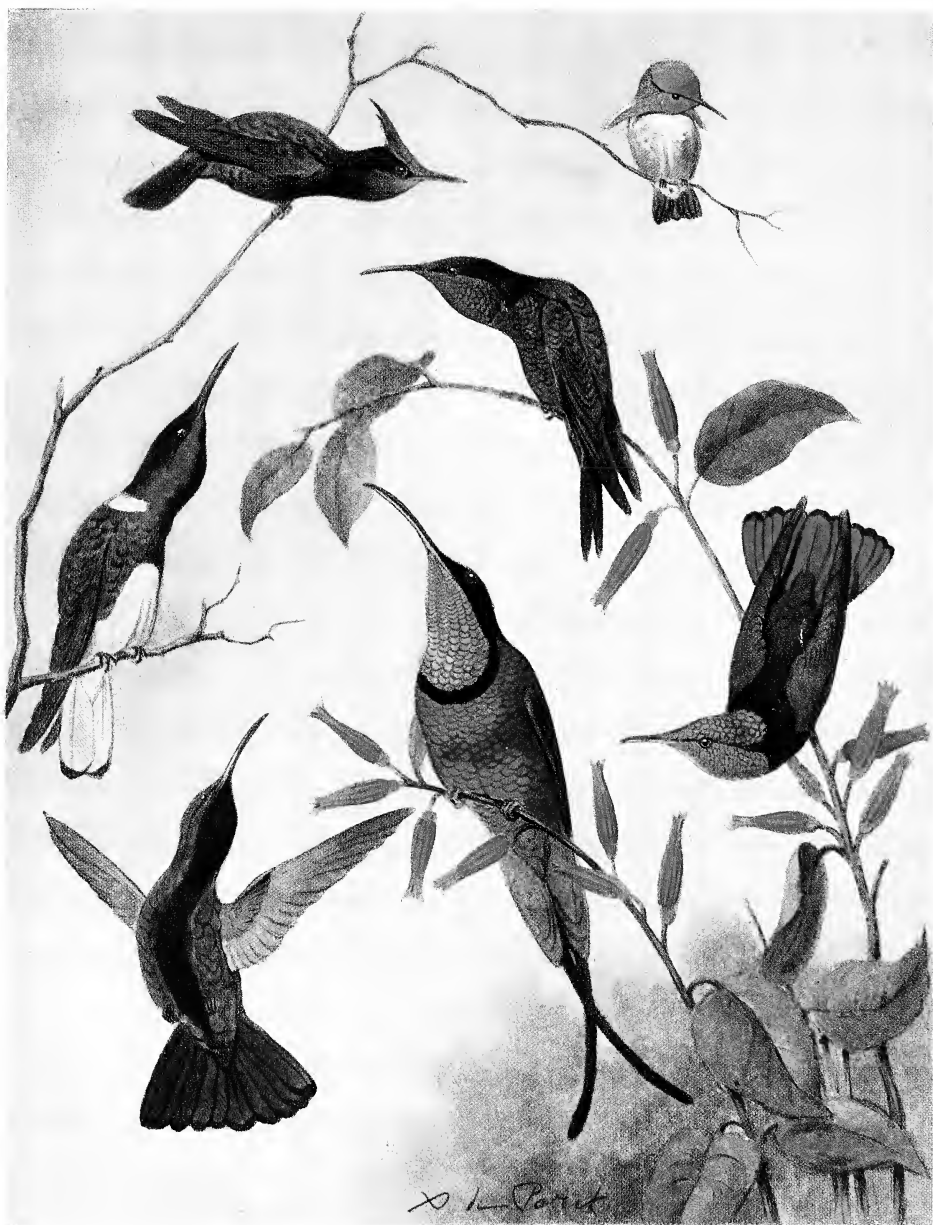
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HUMMING-BIRDS

1/2

Bellona exilis

Florisuga mellivora

Lampornis nigricollis

Thalurania furcata

Topaza pella

Calypte helenæ

Chrysolampis moschitus

THE AVICULTURAL MAGAZINE

BEING THE JOURNAL OF
THE AVICULTURAL SOCIETY
FOR THE STUDY OF
FOREIGN & BRITISH BIRDS
IN FREEDOM & CAPTIVITY

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HUMMING BIRDS

By J. DELACOUR

Humming Birds (*Trochilidæ*) have always aroused more interest than any other family of birds, on account of their minute size, strange shapes, sparkling colours, and humming flight, and to keep them alive in confinement has been the dream of many amateurs, a dream usually supposed to be impossible of fulfilment.

There is no need to insist on the general characteristics of the family. Their tapering tongues adapted for suction, their excessively sharp-pointed wings and tiny feet ; their profile is familiar to everyone. They have three toes all directed forward.

Humming Birds vary much in size ; if most of them are the smallest of existing birds, scarcely larger than a hornet, others attain a considerable size ; the largest (*Patagona gigas*) has a wing 5 inches long.

However it may be, the family is very homogeneous, not only in appearance but in habits. All Humming Birds feed while on the wing and visit the calices of flowers and leaves, where they find tiny insects and nectar. Some are sedentary, others migratory, and in summer they are found in the Far North. Some live on torrid plains, some on the tops of mountains.

Humming Birds are purely American and are met with from Alaska to Patagonia ; but they are most numerous in the tropics.

Old books and pamphlets mention Humming Birds in confinement since the middle of the nineteenth century, and even before then ; in his excellent book, *Aviculture-Passerres*, the Marquess de Brisay entertains us with various attempts, some of which appear to have been very successful. More recently Major A. Pam, in 1908, brought the Zoological Gardens of London eighteen Humming Birds from Venezuela which unfortunately did not survive ; only one (*Lampornis prevosti*) held out for five weeks.

Several unsuccessful attempts were next made by German dealers, and the only one which could be saved was one which Mr. A. Ezra managed to keep alive. It was he, indeed, who, having first succeeded in keeping Sugar Birds alive by giving them Mellin's Food, found the same food made it possible to keep Humming Birds alive. The first he tried, *Ricordia ricordi* from Cuba, lived several years, and in such good condition that it was possible to exhibit it.

But it was the much-regretted Marquess de Ségur who was the first to try this method of feeding. He went to the Antilles and brought back in March, 1914, fourteen Humming Birds, which he kept in perfect health. In 1915 he received thirty more from Venezuela, and most of them lived well.

In 1922 I brought from Guiana myself twenty-one Humming Birds in perfect condition.

Here, briefly set forth, is what is required to procure Humming Birds, keep them alive, and bring them over safe and sound.

My birds were all captured by means of a pea-shooter loaded with a little ball of soft earth ; this hit the Humming Birds, which fell to the ground stunned ; they were at once picked up and brought into camp within two hours. They generally appeared to be lifeless.

Every Humming Bird had then to be held in the hand and its beak plunged into a tepid mixture of Mellin's Food, sugar, honey, and milk (fresh or condensed). It usually began to drink at once ; but some were stubborn ; they were conquered by putting their beaks into my mouth and breathing gently on them, then plunging them into the mixture again. Should this not succeed there was another infallible plan : to plunge the whole beak and nostrils into the liquid ; the bird begins to suffocate, puts out its tongue, and having tasted the mixture,

willy nilly begins to drink greedily. Humming Birds are so gluttonous that even when newly caught and held in the hand they will begin to drink the delicious mixture as soon as they have tasted it.

The effect of this food on the Humming Birds is immediate ; one moment the bird is apparently lifeless ; one swallow, and it flies joyously about ; but it weakens quite as rapidly, and must be taken up again and fed every ten minutes until it is seen to feed itself.

This usually happens in from about four to six hours' time. Some kinds and individuals are slower to settle down, and must sometimes be forcibly fed for several days.

The manner of giving food is highly important, for, above all, Humming Birds must not get any on their plumage as that is what nearly always kills them ; the best feeding vessel therefore is a covered one, with a hole in the lid ; the birds quickly discover and accustom themselves to use it.

It is also absolutely necessary that their food should always be perfectly fresh, and it must be changed as often as the temperature makes it desirable, and, above all, be careful that the bird cannot take even a taste of the mixture made the day before. The best way of preventing this is to leave them in darkness until the fresh food has been given them.

Humming Birds are so quarrelsome that it is impossible to keep two in the same cage ; they must be kept singly from the moment they are caught. But it is not necessary to give them a large cage, as their way of flying enables them to take exercise while, so to speak, remaining in one place. While travelling they do quite well in miniature cages.

Humming Bird cages should be furnished with only one, or two perches, so that they can fly without fraying their wings ; they should be very slight. The floor should be covered with blotting paper. They should be gently sprayed with water every day, or given a wetted plant on which they can bathe. It is of the first importance that their plumage should not get soiled, and if it does they must be carefully washed. Lastly, they must have all the sun possible, and above all the thermometer must never fall below 65° to 70° Fahr. ; the best constant temperature is from 70° to 80° Fahr.

Besides the cream prepared as we have indicated for Sugar Birds, and to which a little powdered meat or "marmite" may be added, it is a good plan to give Humming Birds of the *Dronophilæ* tiny flies, which are easily bred in a vessel containing potato and red wine. Humming Birds can be successfully kept under these conditions; some have even lived so for three years, which is at least as long as they would have lived under normal conditions at liberty.

It is impossible to find out which species were formerly imported, but the following seventeen can be given with certainty, which have lived either in the Zoological Gardens of London or with the Marquess de Ségur, Mr. Ezra, or myself.

Campylopterus largipennis, a fairly large Humming Bird with a long beak, coppery green above, grey below. I brought one back from Guiana.

The Jacobine (*Florisuga mellivora*), a very pretty bird, green above, with white head and breast, a white band across the shoulders and white abdomen. I brought two back from Guiana.

The Mauge (*Lampornis nigricollis*), found from Panama to Brazil, is coppery green above, black bordered with white and green underneath, and a violet tail. It was imported by the Marquess de Ségur and Major Pam.

The Anais (*Petasophora iolata*) has been exhibited at the London Zoological Gardens; it is rather large, green, with blue stripes on the sides of the head and abdomen. It inhabits the Argentine Andes, and Venezuela.

Lampornis prevosti, brought from Venezuela by Major Pam, is distinguished from the above by having less black underneath.

The Grenat (*Eulampis jugularis*), from the Antilles, is velvety black, with metallic red throat and breast; the wings and tail are coppery green.

E. holosericeus, from the same Islands, is coppery green above, golden green on throat and breast, which is edged with blue. The abdomen is black.

Both these species were brought over by the Marquess de Ségur, and lived in France for a long time, especially the first-named.

The Ruby and Topaz (*Chrysolampis mosquitus*), found in all parts

of tropical America, is very small ; it is brown, with a red mark on the head and another, orange yellow, on the throat and breast. Imported by the Marquess de Ségur.

The Crested Humming Bird (*Bellona exilis*) was brought from the Antilles with the two *Eulampis* ; it is a tiny black Humming Bird with a green crest.

Ricordia ricordi, from Cuba, is rather small and has a rather long beak ; it is golden green all over. Mr. Ezra kept it over two years.

The Fork-tailed Humming Bird (*Thalurania furcata*). I brought back eighteen specimens from Guiana, where it is very common. The males are green with shoulders, breast, and abdomen purple-blue. The females are grey with the back and wing coverts green.

Chrysuronia ænone, imported from Venezuela by Major Pam, is green with blue head and neck, and shining golden coppery tail.

Chlorestes notatus, imported with the preceding, is coppery green above, emerald green beneath with a blue chin and steel coloured tail.

Agyrtria milleri, sufficiently wide-spread between Colombia and Brazil, is a little bird, green above, white beneath. *A. fimbriata*, slightly larger, is entirely green, except that the lower abdomen and under-tail coverts are white. Both species were imported by the Marquess de Ségur, and one *A. fimbriata* lived three years in France.

Saucerottea feliciæ, imported by Major Pam and the Marquess de Ségur, is bronzy green above, reddish on the rump, brilliant green below. It inhabits Venezuela.

The Topaz Humming Bird (*Topaza pella*) is probably the most beautiful of all Humming Birds. It is large ; the male is splendid metallic red with black head, golden-yellow throat surrounded by black, and golden-green rump. The two median feathers of the tail are green, the two next them black, prolonged, recurved, and crossed, the others reddish. The females are golden green.

I brought a pair of this glorious Humming Bird back from Guiana.

Calypte helenæ, which the Marquess de Ségur possessed, is a mite from Cuba, the smallest bird known to exist ; above it is steel blue, head and throat bright metallic pink ; the feathers on the sides of the throat very much developed, making a collarette. The body is greyish white above.

NIGHTJARS

By M. LEGENDRE

The family of the *Caprimulgidæ* includes birds which in their shape and insectivorous habits approach the Swallows and Swifts, and at the same time have some relation with nocturnal birds of prey ; such as their crepuscular life, large eyes, and soft dark plumage, with the same harmonies of colour. In size they vary from that of a Scops to a Screech Owl. Like them they are thickly made ; sometimes they have ugly faces with, in certain species, such as the *Nyctibius* of South America, monstrous beaks recalling the cartilaginous jaws of a great fish. They are found in fair numbers throughout the world.

Caprimulgus is the only genus which has European representatives. It is the best-looking of the family, and its distinguishing marks are a beak which is small but deeply split to beyond the eye and furnished at the base with long stiff bristles. Its head is flat with very large eyes, long pointed wings, a very long, slightly rounded tail, and short tarsi.

The European Nightjar (*Caprimulgus europæus*) in my opinion has the most wonderful plumage of any bird, though, naturally, it has no brilliant colours or metallic lustre. I speak of the arrangement, the delicacy and harmony of its dark colouring, which ranges from deep black to pearly grey passing through all shades of rust colour, and not forgetting a few immaculate white spots which adorn the wings and tail. Every long silky feather encloses a multitude of tiny black spots over grey, or longitudinal black lines, or else a medley of shades of reddish brown. The absence of all bright colouring is made up for by a thousand delicate arabesques, and the whole of this silky vesture is made to harmonize with the dusk.

The Nightjar, with its great eyes and large beak, has, through the ages, been considered a singular bird. Accordingly, it has received on all sides strange names, and at the same time remarkable stories are told of it. First "Goat-sucker" because seeing it fly sometimes of an evening close to flocks of goats or other cattle, with the intention of securing the insects which they attract, it was supposed to have the habit of sucking them. Also "Flying Toad", because by some of

its calls and the shape of its beak it is supposed somewhat to resemble that Batrachian.

This migratory bird comes to Europe about the middle of April. It travels singly, and does not pair until some time after its arrival. It lies hidden on the ground through the day in the middle of a bush, or more often perched lengthways on a bough, from which habit it has acquired the name of "Branch Crested". Squatting motionless on its tarsi with its dull mottled plumage it melts into the bough on which it rests, a marvellous example of mimicry. As soon as the evening comes it starts hunting and pursues all kinds of flying insects after the manner of a Swallow, more particularly beetles and night-flying moths. It flies somewhat rapidly, keeping its beak wide open.

The Nightjar nests on the ground in a large excavation under the shelter of a plant. It lays two or three eggs, which are white mottled with pale brown. On the least disturbance the female moves its eggs or its young to another spot.

The Nightjar leaves the country towards the beginning of September, usually singly, as it came. This species is found throughout Europe except in the extreme north (it is commoner in the south). It migrates to all parts of Africa.

A sub-species (*Caprimulgus e. meridionalis*) is found in South Europe and the Mediterranean islands. It is smaller than the above, and its upper parts are lighter.

The Red-necked Nightjar (*Caprimulgus ruficollis*) differs from the European Nightjar chiefly by a white patch on the front of its neck, and by a wide reddish band which surrounds the nape, goes down each side of the neck, and spreads over the throat. It is a little larger, but its habits and nidification are the same as with the other species. It is found in South-West Europe and North-East Africa; that is to say, Spain, Portugal, South France, and Morocco. Further north (England) it is an accidental visitor. It winters in the Sahara.

Another species (*Caprimulgus ægyptius*) is an accidental visitor to Southern Europe. It is found in Asia as well as Egypt and Nubia.

The Nightjar is much easier to keep in captivity than is usually supposed. It is not often found in collections because it is neither brightly coloured nor lively, though I personally have always felt the

charm of its plumage. I have admired it at leisure, even under a magnifying glass, when studying skins, and have always come to the conclusion that the plainest and quietest dress has a beauty of its own. I have successfully reared Nightjars twice in the country where I could spare them a large aviary.

Though the Nightjar usually feeds while flying it will also take food off the ground, and is easily accustomed to a food vessel. It should have the usual insectivorous food with as many live insects as possible, especially moths and butterflies during summer. In the country nothing is easier than to find both these insects; in a short time on fine summer evenings one can catch them in quantity. For the winter the bird requires warmth and food which is rich with ephemera and dried flies. Its cage should be large with only a few perches made from branches as thick as one's wrist with the bark left on. Thus it can squat lengthways on them.

The birds which I twice reared from the nest became very confiding and would take food from the hand; they were very gentle and would allow themselves to be caressed, which was another point of resemblance between them and the Scops. Like them, Nightjars awake from their semi-sleep towards the close of day, when they stretch their wings, hop about a little and go to their feeding vessels. As the darkness increases these birds, which seemed so heavy stretched along their perches, recover their agility and spirits and flit about their aviary on their great wings, velvety and beautiful, like those of a large nocturnal moth.

[We understand that the Nightjar has been bred successfully in captivity in Berlin by Dr. Heinroth.—ED.]

MOTMOTS AND BEE-EATERS

Here are two allied families, the first coming from the New World, the second from the Old. Both have large heads and beaks and proportionately small bodies, very small feet with three of the toes directed to the front, highly decorated tails (either spatulated or pointed), and brilliant colouring in which green predominates. All are wholly insectivorous.

MOTMOTS

By J. DELACOUR

The Momotidæ inhabit the forests of tropical America ; the genus *Momotus* comprises about twenty species, all more or less alike. Speaking generally, they are birds about the size of a Jay with long notched beaks and large reddish-brown eyes ; their large heads are a mixture of black and bright blue ; the upper back and under parts are greenish-yellow more or less accentuated with two little metallic blue spots on the breast, this being green like the tail, which last is very long and has a strange peculiarity : the two middle feathers, which are longer than the others, are terminated by paddles which are divided from the remainder of the feathers by a length of bare quill ; these are produced by the breaking away of the barbs, after the growth of the feathers, the bird itself assisting during preening operations.

The Common Motmot (*Momotus momota*) from Guiana and the Amazon is most frequently imported ; it is reddish-green above. I have often watched it in the Guiana forests, sometimes in pairs, sometimes in flocks. It prefers the lower branches and is not at all timid. When it perches on a bough it incessantly utters the low cluck which is its call, while jerking its long spathulated tail from right to left. This species like the rest of the genus nests in holes in banks.

In a cage it is a charming bird, lively and intelligent, sometimes it becomes spiteful through excessive familiarity ; it is better kept singly, as it is rather noisy. I kept one for four years and it only died then because my aviaries were destroyed during the war. Mr. Astley had one ten years which then escaped. So it is evident that Motmots live well in confinement ; they are fed on insectivorous mixture, mealworms, a few earthworms, and a little meat and cheese. The three following species have been imported : *M. lessoni*, from Panama, green beneath ; *M. subrufescens*, found from Panama to Brazil, russet beneath ; *M. swainsoni*, which I brought back from Trinidad, chestnut beneath. They all behave like the Common Motmot in confinement.

Here I will just mention the Todies (*Todus*), a little genus confined to the great Antilles. They are very small long-beaked birds, having rather short tails, and long thin tarsi ; they are green above, yellow beneath, with the throat and sides rose-coloured.

BEE-EATERS

By M. LEGENDRE

In this genus (*Merops*), which is confined to the old world, we find birds of gorgeous colouring. They possess the following characteristics: medium size, lengthy, pointed, and slightly curved beak, short and weak tarsi, the middle toe is joined to the outer one up to the second joint, and up to the first with the inner one, the wings are long, rather narrow, tail long and rounded, with the two middle feathers often prolonged beyond the others. The colouring is bright and diverse and there is very little difference between the sexes. These exceedingly peaceable and sociable birds have in some measure the same conformation as the Swallows; like them their flight is sustained and easy, and they live on insects which they generally take flying. They nest in flocks in holes dug in banks as do Sand Martins.

As its name implies, the Bee-Eater lives chiefly on hymenopterous insects, which it takes flying. Sometimes, if tired, it perches on a projecting bough and waits for its prey to pass. There are two species of Bee-Eaters in Europe: *Merops apiaster* and *Merops persicus*, the latter being very rare.

The Common Bee Eater (*Merops apiaster*) has the top of the head, nape, and upper part of the back chestnut red; the lower back and rump yellowish-red. The throat is yellow, encircled with a black collar, the rest of the under parts blue-green, darker on the breast. The forehead is aquamarine, and a black stripe extends from the beak to the parotid region. Olive-green wings with the median feathers deep rust colour, and all the quills black tipped. The tail is deeper green than the wings. Such is the costume of this fine African bird which visits Europe some months in the year.

The Bee-Eater arrives in Europe towards the end of April or beginning of May; it may then be seen in larger or smaller flocks in the South of France, in the valleys on river banks, by lakes, and sandy slopes. It occurs all along the Rhône, and over the Camargne. The Bee-Eater nests in some places in the South, particularly in the Department of Gard. It is an occasional visitor in the more central parts.

Its nesting is similar to that of the Sand Martin. It prefers sandy banks and cuttings above a watercourse, a cliff with earthy sides on which its nails and beak can make some impression. It digs a gallery of about 3 to 6 feet deep, this passage ending in a chamber the level of which is decidedly higher than the entry. Some observers assert that they have found a second chamber behind the first one, and communicating with it by means of a short passage. May this second chamber be intended for a refuge from danger? It lays from four to six pure white, lustrous eggs, rounded, and measuring 25 by 20 mm. M. Heim de Balsac, in his recent ornithological travels through the north of Italy, discovered Bee-Eaters' nests tunnelled into the flat earth. As they could not find banks the birds burrowed into the ground like rats (a fact likewise observed in Spain by Dr. Bureau); M. Heim de Balsac discovered the eggs at a depth of some 8 feet. After rearing their young the birds flock again and wander until about September or October, when they return to Africa.

The Persian Bee-Eater (*Merops persicus*) has its forehead adorned with a little white band; it is olive-green above, has a yellow throat and light-green breast. A black stripe from the beak to the parotid region; the wings are the same colour as the back, with the flights tipped brownish, its tail is bluish green; it is smaller than the other species. It is found in East Africa and Asia to India. Pallas found its nests in quantity on the steep banks of the Caspian Sea; it appears in Sicily and Italy, and is an accidental visitor north of the Mediterranean. In 1882 two Bee-Eaters of this species were killed in the Department of Hérault.

The Bee-Eater, with its elegant shape and plumage adorned with such beautiful colours, is one of the most beautiful of aviary birds. But to domesticate an adult requires unlimited patience and most attentive care before it will feed itself from its dish. It must be crammed with all kinds of insects for a very long time, then with little pieces of bullock's heart, which when they are a little tame the birds will accept and catch on the wing. They will take many sorts of insects: bees, wasps, cockroaches and grasshoppers; they are particularly fond of these last. M. Plocq even gave them cockchafers with the elytræ

removed. The artificial food should be the same as for a Hoopoe, i.e. meat and mealworms. Naturally, they will accept all other insects with pleasure.

It is much easier to rear the young from the nest, and I will refer the reader to the article on rearing Hoopoes, for these two long-beaked captives are similar in their habits and requirements. A young Bee-Eater taken from the nest and hand-reared becomes very tame is not at all timid, and willingly allows itself to be handled. It likes to fly gaily from one perch to another in a large aviary, come down to its food vessel, take a mealworm or piece of meat, shake it vigorously in its beak and swallow it. Then from time to time it sits motionless on the perch for digestion's sake, and if the day's food has been rich in insects it casts up a little pellet about the size of a pea and then resumes its joyous activity.

This bird rarely drinks, and some fanciers will leave it without liquid for a very long time; this is not to be recommended, and it is not much trouble to supply a little pan of water for the larger insectivorous birds which are fed on meat. It is also well to teach them to take such fruit as grapes, pears, melon, etc., fairly often; these may be cut into the same sized pieces as their other food.

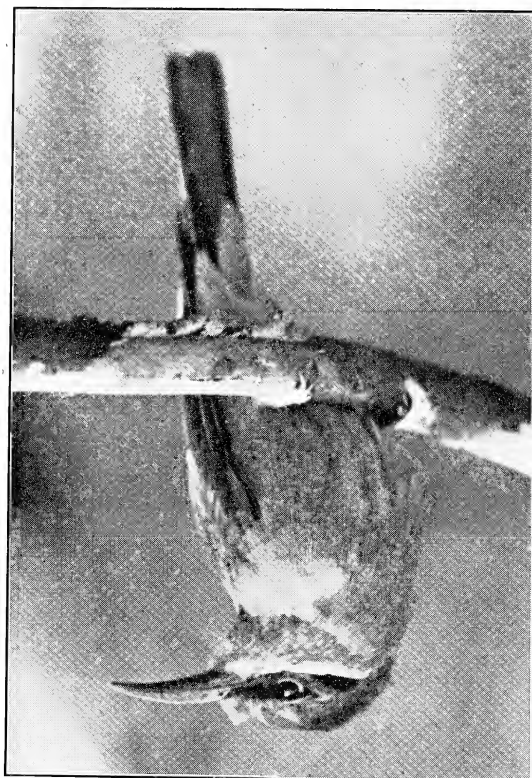
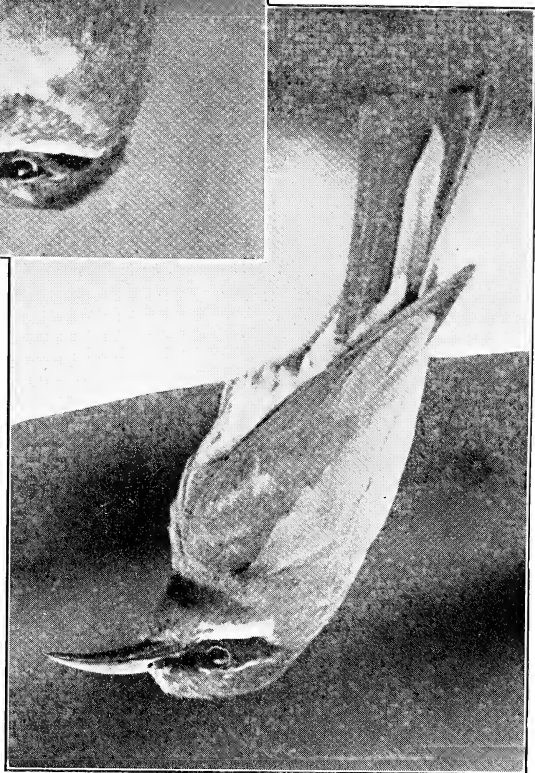
Bee-Eaters will even enjoy greenstuff, for it must be borne in mind that in a state of nature birds take foods which are unknown to us, and which serve them as medicines.

Two exotic kinds of Bee-Eaters have once or twice been imported.

The Green Bee-Eater (*M. orientalis*), which is to be found from North Africa to Indo-China, is rather small, green, and has the top of the head and neck coloured tawny brown, a bluish throat, a black line from the beak to the cheeks and another on the breast.

The Australian Bee-Eater (*M. ornatus*), a larger bird, is green, having the lower back and rump light blue, tail and wings deep blue, throat yellow, edged with black at the base; nape brownish yellow, cheeks blue and black. A pair of these lived for a considerable time in the London Zoological Gardens.

They should have the same treatment as the European species.



[To face p. 36.

Australian Bee-eater (*Merops ornatus*).
D. Seth-Smith.

THE BIRDS AT FOXWARREN PARK

By J. DELACOUR

Many of our members may have been surprised that no descriptions of our present President's beautiful aviaries and enclosures have appeared yet in the Magazine. The reason is that Mr. Alfred Ezra, being continually building new ones and extending his collections, it is rather a difficult task to give an account of them which will not be out of date at the time it is published. These lines only endeavour to give an idea of the birds in their surroundings as they were at Foxwarren in the autumn of 1925.

Foxwarren Park is situated on the lovely Surrey Hills, and extends over some 300 acres of sandy soil, very suitable for birds and mammals on account of its dryness. Most of it is covered with woods and heather with large meadows around. The view from the house is extensive and very beautiful.

In the large and pretty garden surrounding the house a few birds live at liberty. Demoiselle Cranes and Trumpeters of two species (Grey-winged and Green-winged) add much to the charm of the scenery; while some foreign Doves and Pigeons fly from tree to tree.

At a short distance, in a well-sheltered spot, a bird room has been arranged in a small building, well lighted from the sides and roof and heated by hot-water pipes. The room measures 32 by 16 feet. Along three sides runs a table supporting cages of various styles and dimensions, while a very pretty and light aviary, all built of wire and iron (which used to be the home of many Sunbirds and Humming Birds in Mr. Ezra's London flat, some years ago), stands in the centre.

This aviary contains a fine series of birds: three Royal Starlings, one pair of Swift Parrakeets, one Indian Pitta, one Yellow-fronted Woodpecker (*Melanerpes flavifrons*), two Black-headed Yellow Bulbuls, and two White-shouldered Bush-chats (*Thamnolæa cinnamomeiventris*).

The cages are inhabited by the following birds: three Shammas, one Bakbakiri and one Black and Scarlet Shrikes (*Laniarius atrococcineus*), one pair of Chestnut-bellied Niltava, three Golden-fronted Fruit-suckers, three Robin Chats (*Cossypha humeralis*, *C. caffra*, *C. bicolor*), two Mocking-birds (*Mimus gilvus*, *M. modulator*), one white Blackbird,

one pair of Indian Mynahs, the male a wonderful mimic, and the female an albino, three young Superb Starlings, born in the aviaries, and two Avadavats, trained to sing tunes. The collection of Parrakeets is most interesting ; there are wonderful Lutinos, three young Blossom-heads, 10 Ring-neck, all with pink eyes ; one semi-lutino male Ring-neck, of a pale yellowish-green ; one male Malabar ; one male Layard's ; two Long-tailed ; one Tabuan, and one Taviuni, one Rock Peplar, and a pair of Eclectus (*E. roratus*).

Other Parrakeets are to be seen in a series of movable aviaries in the park : Yellow-bellied, Pennant's, Stanley's, King, Barraband's, and Crimson-winged, and above all, a wonderful pair of Alexandrines, the male light-blue and the female pure yellow ; it is to be hoped that this lovely couple of " sports " will soon rear young ones, some of them will no doubt show most interesting variations ; blue varieties in *Palæornis* Parrakeets are still rarer than yellow ones, and exceedingly beautiful.

At some distance from the Parrakeets' aviaries, a pair of Emus inhabit an enclosure, as they proved very quarrelsome with other birds and animals in the large enclosure, of which we shall now say a word.

This enclosure consists of a stretch of hilly ground of some 16 acres, partly wooded and partly covered with heather, brush, and grass, all surrounded by a high fence. This is made of iron posts and strong wire netting of a narrower mesh at the lower part, 10 feet high with 2 feet sunk in the ground, and a piece of netting overlapping both sides at the top, so that it is perfectly safe from all escapes and also from all intrusion of vermin. The enclosure contains several sheds and a pool of water ; it is in view of the house, although the fence is invisible, hidden as it is in a hollow in front, the whole effect being extremely attractive. There live many mammals : Axis Deer, Black-buck Antelopes, Red Kangaroos, Rock Damia, and common Wallabies. Birds are represented by eight Sarus Cranes (four of which are full-winged and live in a free state), seven Demoiselle, and four Black-crowned Cranes ; some forty Chukar Partridges, Golden and Amherst Pheasants, Monauls and Australian Brush Turkeys.

We now come to the aviaries proper, which have been built in an open space, facing south and sheltered by a wood of young larch-

trees. The first group was built two years ago, and a second one has just been added, which was almost completed at the time of my last visit (October, 1925) but was not yet filled with birds. Others will be added gradually for new birds, in particular, Pheasants.

The first group of aviaries, intended for small and medium-sized birds, consists first of a building 80 feet long by 12 feet wide ; its height is 12 ft. 6 in. in the centre and 9 feet on the sides. It is built of double wood, with felt between to keep the warmth, the floor is of concrete and the roof of wood, covered with ruberoid. There are large windows on the roof and in front, giving plenty of light. It is heated throughout by hot-water pipes and lit by electric globes. This house is divided into nine compartments, each being 10 ft. 6 in. wide ; the first one is used as a kitchen and a store for the bird keepers, while the other eight constitute the shelters of the aviaries ; doors enable one to pass from one to the other and also to the outdoor flights. The shelters are furnished with branches and nests of different kinds, faggots fixed high up, and tables for food.

The eight shelters correspond with eight outdoor aviaries, the first one 21 feet by 17 ft. 6 in., the other seven 10 ft. 6 in. by 17 ft. 6 in. ; those also communicate by doors with three large flights 42 feet by 31 ft. 6 in. Such an arrangement is very practical as it enables one to let out into the large aviaries the inhabitants of any one of the three small corresponding ones, or of all of them if necessary.

Those outdoor flights are built of raw larch trunks and covered with very small mesh wire sunk deep in the ground so that intrusions of mice or other pests are made impossible. A gravel path runs all round, while the centre is grassy with trees and bushes here and there ; perches and faggots are hung up in different places. The three large flights have a roomy, concreted pool in the middle. The whole arrangement is practical and convenient, and the birds form a great attraction to the visitor. Seats are disposed all round the aviaries to allow observation.

The second group, which has doubtless by now been completed, consists of three small aviaries with shelters and one large flight of the same style and dimensions as those described above, with the only exception that they are not heated. They are intended for hardier

birds. The following list of the birds which inhabited the aviaries in October, 1925, will give an idea of the importance of the collection :—

1ST AVIARY

Blue-headed Ground Pigeons (*Starnœnas cyanocephala*), Talpacoti Doves, Pigmy Doves, Diamond Doves, Chinese Quails, numerous Australian Finches, Gouldians, Bichenos, Masked, Zebra, Longtailed Grass Finches, Diamond Sparrows, Waxbills, Melbas, Crimson, Lavender, Grey, Orange-cheeked, Cordon-bleus, Red and Green Avadavats, Aurora Finches, Trumpeter Bullfinches, Versicolor and Nonpariel Buntings, Cuban Finches, Black-headed Siskins, Violet Tanagers, Black-headed Yellow Bulbuls and Blue Robins.

2ND AVIARY (communicating with large flight)

Californian Quails, Bronze-winged Pigeons, Bar-shouldered Doves, Dwarf Turtle Doves, Ashy Doves, Ruffs, Tri-coloured Spreos, Orange-headed Thrushes, Martinique Grackles, Red-eared Bulbuls, Yellow-fronted Barbets, Red Cardinals.

3RD AVIARY

Annamese Partridges (*Tropicoperdix merlini*), Grey-headed Ground Pigeons (*Geotrygon caniceps*), Diamond Doves, Mesias, Red-vented Bulbuls, Red-breasted Rock Thrushes, Scarlet Tanagers, Golden-fronted Fruit-Suckers, Blue Robins, Yellow-backed and Paradise Whydahs.

4TH AVIARY (communicating with large flight)

Pink-headed Ducks, Roulrouls, Harlequin Quails, Cuban Quails, Bleeding-heart Pigeons, Bronze-winged Pigeons, Cuban Partridge Pigeons (*Geotrygon chrysia*), American Catbirds, Hermit Thrushes, Red-breasted Rock Thrushes, Orange-headed Thrushes (*Geocichla cyanotus*), Layard's Bulbuls, Rose-breasted Grosbeaks, Giant Whydahs, and Bishop Weavers.

5TH AVIARY

Black-winged Grackles, Australian Catbirds, American Robins, Superb Spreos, White-crested Jay Thrush, Golden-fronted Fruit-Sucker.

6TH AVIARY

Three Common Crowned Pigeons, two Nicobar Pigeons, and two pairs of Donaldson's Touracous.

7TH AVIARY (communicating with large flight)

Californian and Harlequin Quails, Grey-headed Ground Pigeons, Peaceful Doves, Crowned Lapwings, Senegal Touracous, Brown-cheeked Jay Thrushes (*Dryonastes lugens*), Orange-headed Thrushes, Blue Robins, Blue-fronted Redstart (*Ruticilla frontalis*), Black-cheeked Cardinals, and Grenadiers Weavers.

8TH AVIARY

Asiatic Bush Quails, Button Quails, Roulrouls, White-breasted Doves, Red Mountain Doves, and Shamas.

Such was the Foxwarren bird collection just before I left for the Far East, and readers will certainly excuse me for the roughness of the above notes, written on board ship. Everybody knows that it is quite a problem to do anything on an overcrowded ship, in the heat of the tropics. Among the many boats that we have crossed in the Indian Ocean must have been one on which Mr. W. Goodfellow, on his return from New Guinea, was bringing wonderful birds for Mr. Ezra. How I wish I could have seen them safely arrived at Foxwarren before my departure! But no doubt the AVICULTURAL MAGAZINE will bring me news of my friend's ornithological treasures while I am collecting in the Indo-Chinese jungle.

THE PEARL-SPOTTED OWLET
(*GLAUCIDIUM PERLATUM*)

By the MARQUESS OF TAVISTOCK

As this pretty little African Owl continues to figure occasionally in dealers' lists I feel prompted by my success in keeping an individual alive for over five years to send a few further notes, more especially as I am inclined to believe that most, if not all, specimens that have come into the hands of other aviculturists have failed to survive more than a few months.

The Pearl-spotted Owlet, judging by my "Owlikins", is not at all hardy, and the early demise of others of his kind in this country may have been due to their owners' failing to keep them sufficiently warm.

Although normally a healthy and lively little bird, Owlikins has several times caught colds and chills, and only removal to the hospital hut—that invaluable adjunct to a large collection of tropical birds—has probably saved his life. According to my experience the Pearl-spotted Owlet cannot be safely exposed to a lower temperature than 60° Fahrenheit, and draughts and sudden changes must be scrupulously avoided. In the case of enteritis, loss of appetite and the usual symptoms of bowel trouble are apparent. A more common and less serious form of cold manifests itself in wheezing, and, if severe, in a dilation and contraction of the eye. Heat, a temperature of 85°, is the only effective remedy, it being impossible to give medicine to an owl owing to its power of regurgitating any unpleasant-tasting substance it may be forced to swallow. The food should consist of mice, sparrows, meal-worms, cockroaches, and other insects, and must be given perfectly fresh. Tainted meat is very injurious to owls, and the victim which has been obliged by hunger to eat such food immediately loses its appetite and drinks copiously. Owlikins baths occasionally, but only when the temperature is high, and, unlike most birds, he is sublimely indifferent to the dirtiness of his bath-water! He is allowed out of his cage daily for several hours' exercise in a small room. Owing to the complete loss of his upper mandible he is somewhat handicapped in feeding and playing, though not sufficiently so to prevent him from killing and partly eating a Canary which happened to be in a cage in a room into which he one day escaped! He has a less varied repertoire of conversation than a Little Owl, and the only sounds I have heard him utter are a gentle twittering cry when excited or alarmed and a succession of plaintive, musical calls during the breeding season only. The Pearl-spotted Owlet is not a bird I should recommend for a large collection, where there is no special accommodation for its needs. As a pet, however, it has some strong recommendations to counterbalance its rather inconvenient sensitiveness to cold. It has the semi-diurnal habits and much of the inquisitiveness, activity, and intelligence of the Little Owl, which, when really tame, I consider unequalled among birds *as a companion*. The markings of the Pearl-spotted Owlet's plumage are very beautiful, and the tiny round face, alert yet solemn, and capable of many changes of expression, is likely to win many hearts

for this most fascinating little elf. Adult birds can be tamed successfully, although naturally it needs some of the falconer's skill and patience to do so, for they are very nervous.

One more word about food by way of conclusion : there is a widespread belief among owners of birds of prey that a day's fast once a week is beneficial, if not actually necessary. Without going so far as to say that an occasional day on short commons will do an Owl any harm, I have not the slightest hesitation in stating that far more Owls are killed by under- than by over-feeding. I have never lost any kind of Owl from over-fatness, even when the birds have been kept in rather cramped quarters for an unlimited period with more food than they could eat, but until I learned wisdom I more than once lost one from the indirect results of giving too little food. Stint an Owl, even a very little, especially during or after the moult and tuberculosis will take advantage of his lowered vitality and speedily carry him off. Food must not only be abundant, but natural, and, as I have already said, quite fresh. Butcher's meat and fowls' heads of uncertain age are a poor substitute for mice, insects, small birds, and, where large species are catered for, rats and rabbits.

THE BIRDS AT LONGDON IN 1925

By Captain H. S. STOKES

To justify my existence as an aviculturist and as a respite from the feverish buying of almost any foreign bird that came new to me as a beginner, I this year determined to thin out a few of the birds, make up pairs of the favourite ones, and try to breed something. For real pleasure, let me say, I still prefer an aviary full of beauty and fun and life, and have devoted one—my largest—to this purpose. Here the odd birds are kept, and the abiding joy of them shall be described later.

The remaining six aviaries in this range, smaller but of varying size, were euphemistically dubbed breeding aviaries and pious hopes expressed that they would justify their name. Alas, one's hopes are seldom realized, and the unexpected usually happens. Next season, we think, we shall profit by the mistakes of this one, yet there is always

so much to learn ; 1924 was hopelessly wet and cold for breeding, 1925 was gloriously fine, and we are told that many tropical birds will not go to nest till the rains begin ! Out of twenty-two pairs of birds put up only five young were reared, exclusive of Budgerigars.

To resume then : No. 1 aviary contained a few small Finches, Diamond Doves, Lilac-crowned Fruit Pigeons, and Golden-eyed Babblers. The Babblers were discovered eating the Diamond Doves' eggs, and were hastily removed. A cock Cordon Bleu died on the nest just as the eggs were due to hatch. The Lilac-crowns reared a young one quite early in March and a second one in September, with two more unsuccessful efforts in between. So I am now the proud possessor of four aviary-bred Lilac-crowns, of which two are certainly hens.

No. 2 aviary contained a cock and two hen *Spreo superbus*. To these were added another pair to test their proclivities for colony nesting. One of the new ones was immediately killed, and the other barely tolerated. The three old ones reared between them one young to the age of three weeks, when it died just ready to leave the nest, presumably from a surfeit of mealworms. They all three stuffed the poor thing with incredible quantities of all the live food I could supply and from the continual clamouring I thought there must be at least four babies to be fed. In this aviary also were four Tataupa Tinamous, of which one hen, the largest bird, laid beautiful pink eggs, which nobody sat on.

No. 3 had four Royal Starlings (*Cosmopsarus regius*), probably three cocks and one hen, who all looked perfectly lovely, but never went near a nest box. However, they only arrived in April.

In No. 4 also some of the birds were certainly imported rather late for breeding, and then had to be got into condition before being turned out. Orange-headed Ground Thrushes built, but did not lay, Mesias and Virginian Cardinals did nothing, Diamond Doves reared two young, Giant Whydahs absolutely declined to look at one another in spite of a patch of long grass grown for their special benefit. A pair of Donaldson's Touracos were terribly wild at first, and probably disturbed the other birds, but they have settled down nicely now and feed one another. They have since been left in sole possession of this

aviary, and though it is an unheated one they are standing the cold of late November very well, and are out for an airing even on the coldest day.

No. 5 aviary had too many birds in it, and no results at all. Red-eared Bulbuls, Golden-eyed Babblers, Crimson-crowned Weavers, Lilac-crowned Fruit Pigeons (the hen perhaps not of breeding age), Abyssinian Emerald-spotted Doves, and Black-breasted Colins. The Colins went to nest under a tuft of grass and laid twenty eggs, and as soon as the cock began to sit the hen died.

No. 6 contained Diamond Doves, again successful, and, to my mind, the most charming of all the small Doves, Grey-tailed Fruit Pigeons (*Osmotreron griseicauda*) from Java, beautiful stupid things, and my beloved pair of Sibias. These did a great deal of love-making and played about with bents and moss, but built no nest. Probably the aviary was too low. A further indoor flight contained Blue Budgerigars, which I put up for breeding in January, as the weather was warm and the room well heated. One pair proved very prolific, rearing thirteen young, of which the first two nests (five birds) were all hens. The remaining two pairs reared only two between them, but one of the hens was in a perpetual state of hideous moult, and now threatens to be a dirty white colour instead of blue.

Parenthetically let me advise the giving of insectivorous food for the rearing of young Blue Budgies. Mine have thriven amazingly on it, and on leaving the nest are almost twice the size of the French birds one sees in shops.

In the odd birds' aviary we have successfully moulted the Racquet-tailed Drongo for the second time. But it is a long and difficult job, and takes nearly three months to accomplish. One racquet was shed quite six weeks before the other, and the flight feathers take a long time to change. The trouble probably is that he is naturally purely insectivorous, and is with difficulty provided with all the live food necessary for a rapid moult. He makes up for it by occasionally eating a Weaver or other small bird, but is a treasure for his extraordinary powers of mimicry and beauty of song and comic ways.

A Senegal Touraco named Jacob fell sick, and astonished us by laying an egg! Such a bold, bad character we had thought must be a cock.

A second egg was laid sitting in a cigar box like any domestic pigeon, with the Black-necked Grackle, devoted friend, standing on the edge of it preening her feathers for her and me looking on below. So I have hopes of making another story of this another year if she will take to her new mate acquired with great trouble and a good deal of cheek from kind forbearing friends.

At present the cock has rheumatism, and the hen bullies him hopelessly, so they are separated for the winter—what lovely birds they are; tame and affectionate and beautiful, and flashing with green and purple and crimson splendour as they leap through the air.

All sorts of other treasures inhabit this aviary: a Long-tailed Roller, moulted now three times and not easy to manage at these periods; a Sun Bittern with a passion for Stickebacks (without their spines); a Yellow-fronted Barbet (*Cyanops flavifrons*), a tame amusing glutton with an undying hatred for all other green birds. Robins, various Thrushes, Tanagers, Hangnests, and Weavers add to the throng, my only remaining Cayenne Crake, and a pair of Plumed Ground Doves, which broadcast their eggs, but never sit.

Later arrivals among the birds include a pair of Crowned Lapwings from South Africa, charming and tame, but already described in the Magazine.

A pair of Flamingoes live on the stream immediately under my bedroom window. They are turning pink, and look lovely among the pink water lilies and pink and purple spiraeas and loose stripes on the banks.

If you have a pond or stream nothing seems easier or more picturesque to keep on it. Mine never leave the water, and require nothing but soaked bread and wheat and what they find for themselves.

Their skating walk, the endless curves and knots in which they tie themselves, and the absurd angles of their legs are always a source of wonder and amusement.

BREEDING BLUE-WINGED GRASS PARRAKEETS IN SPITE OF X

By the MARQUESS OF TAVISTOCK

Do you know X? He is the malevolent demon who makes a speciality of tormenting aviculturists. Have you a beloved pet, unbeatable, perhaps, on the show bench, a bird with a constitution of iron who never ruffles a feather when the thermometer drops from 80° to freezing-point in the middle of the moult? Then assuredly X will invent some new and horrid ailment which will carry him off in the pride of his health and vigour, while other birds of the same species with not half his stamina and beauty flourish like green bay-trees under the same conditions. Have you six cocks and only one hen of a variety you delight in? Then be sure that X will arrange that the next fatal accident falls to the lot of the female and avoids a male you could far better spare. Do you move heaven and earth for years to secure a pair of some fearfully rare bird? Be sure that when at last you succeed, X will infect one of the pair with a lingering and incurable ailment, on board ship, and it will arrive only to die by inches before your eyes. Do you desire to breed a bird that with other aviculturists is as prolific as a Budgerigar? Then, for all the success X will let you attain, you might as well be trying to breed the Cock-of-the-rock! As a general rule X gets things pretty much his own way, however hard you strive against him. After all, you have only been an aviculturist ten, twenty, or forty years, while he has been at his game ever since he inspired a wild cat to eat the first Jungle-fowl that the first pioneer of the poultry industry succeeded in taming.

In the matter of the Blue-wings, however, I am of opinion that, on the whole, I am one up on X. This year my new aviaries were for the first time more or less ready for this rare and lovely little Grass Parrakeet, and I decided that I would breed Blue-wings. X made up his mind that I should *not* breed Blue-wings. The battle began in May, when my best pair of Blue-wings went to nest in a cage in the dining room. The hen of this pair had laid the previous summer, and the room was nice and warm, nevertheless X succeeded in playing successfully his usual first card in a breeding episode by making the

hen egg-bound with her second egg. I moved her, cage and all, into the hospital, where the heat enabled her to lay successfully. I kept her there for about a week longer, at the end of which period, as she appeared to have finished laying and to be sitting steadily, I put the cage back where it was before. A day later the hen got egg-bound again, and on looking into the box I found that this was only her third egg! X alone could induce a hen to arrange a space of a week between the second and third egg of her clutch of four, but X, as you will be aware, if you know him as well as I do, is a very resourceful individual. This time the hen was very ill, and to my despair the almost unfailing remedy of heat was unavailing and she sank and sank. In desperation I tried a liberal application of olive oil, and to my surprise she rallied, got stronger, and finally laid. Of course, after this I did not venture to let her attempt any more eggs, so I removed the nest and gave the unfinished clutch to a foster parent. X pointed out to the foster parent that the eggs were smaller than her own and that she had better eat them—which she promptly did. Thus ended the first round, the honours being with X.

After having some fun with various newly-hatched broods, X apparently departed at the end of June to visit the collections of other aviculturists. During his absence three pairs of Blue-wings went to nest, the last being the pair whose misadventures have been already recorded. On his return (X is never away long, particularly during the breeding season) he seemed annoyed at the turn events had taken and proceeded to deal with the situation. His first step was to slaughter the cock of the dining-room pair. He was a lovely little bird, the largest and finest Blue-wing I have ever seen, and I had grown very fond of him during the winter when he was in the house. The widow, however, remained faithful to her nest in spite of her bereavement. In due course all three hens hatched, and after a time a nice little Blue-wing left one of the nests in the aviary shelter and a few days later ventured into the flight. It returned to the shelter of its own accord during the afternoon, and fearful lest the precious baby should catch a chill I decided to shut it in with its parents until the following morning. Before driving in the old birds, I thought it would be wise to replenish the food and water, and in order to do so unfastened a

little side door very cautiously with my hand over the opening in case the youngster were startled. At that moment X made a face at the young Blue-wing from the opposite end of the shelter; at least, I suppose he did, for it came straight at my hand, squeezed through my fingers, and was gone. My feelings can better be imagined than described. What chance was there that I should ever recapture alive a delicate nestling too young to feed itself, which had had but a few hours to get an imperfect view of its surroundings? In the case of many Parrakeets the loud calls of the parents might attract the wanderer, but the call of a Blue-wing is so feeble that it does not carry 20 yards. Night fell without any further signs of the young bird, and early next morning he was still missing. About eight o'clock, however, to my great joy and surprise, the little Blue-wing alighted on my aviary near me and with no difficulty found his way to his parents, who fed him through the wire. At any rate, now he would not stray, and if he escaped Owls and chills there should be a good chance of recapturing him. All our efforts, however, that day were fruitless and the evening set in wet. Next morning he again appeared and by shutting up his parents and using an odd cock bird in a cage as a decoy I was at length able to entice him into an aviary and return him to his family none the worse for his adventures. His sister left the nest soon after, and both have done extremely well and grown into beautiful birds as big or bigger than their parents. For a time no further complications arose, but one morning, to my disgust, I saw that the widow was ill. Looking into her nest I saw three nice babies of different sizes, one almost fledged, one partly fledged, and one still quite tiny. What was to be done? They seemed too young to feed themselves and yet were too old to let me feed them. I wondered if I could put them in the nest of the third pair if their young were the same age, and with the help of the gardener I proceeded to investigate. I was pulling out the sliding zinc tray of the shelter in order to reach the nest when he called out to me, "One has fallen down!" and a moment later held up a tiny unfledged nestling (much smaller than No. 3 of the other brood) who ought to have been in the box for weeks longer. Evidently the accursed X had again been busy, and I looked into to ascertain the full extent of the disaster.

An even smaller chick lay on the sand below the box : it was quite cold and almost lifeless : the box itself contained only a few addled eggs. What had happened ? Had the old birds thrown them out in order to nest again, or had they deserted them and had hunger forced them to make a premature exit ? Instead of solving the problem of the first three, it looked as though five babies were likely to come to an untimely end. The elder chick of the two that had fallen out proved to have a full crop, which did not look like desertion, so I unfastened the nest box, made a slight alteration to render it more difficult for the young to climb out, put it up again and put the young Blue-wings inside, the warmth of my hands having somewhat revived the smaller one. Then I shut the parents into the shelter and left them for the day, hoping for the best and expecting the worst. Next morning I looked into the nest again, thinking to find one corpse at least, but I was agreeably surprised to find both young ones alive and well. How or why such tiny nestlings climbed out of their box remains a mystery. In due course both left the nest and at the time of writing are strong and well. The father was a bird I bred some years ago at Binstead, but in a fixed aviary he had always been infertile.

The widow was not very weak when I took her in, but for a time grew slowly worse and was quite unable to feed her family. I tried hand feeding, but only the youngest would swallow anything and to my sorrow I found him dead next morning. The eldest, under pressure of starvation, began to eat soaked seed for himself on the second day and just pulled through, but No. 2 was in a bad way, not only starving, but suffering from bowel trouble and getting very weak. Desperate measures had to be resorted to. If a Parrakeet is really ill it does not do to be pedantic about natural food. Anything that you can get down its throat that will nourish it is worth trying ; so in addition to "Pinko" and "Yadil" as medicine, I started feeding the baby on yolk of egg and milk out of a fountain-pen filler. He showed the most profound dislike both to the food and the method of its administration, but it kept him alive, and after a few days he actually grew stronger, the bowel trouble abated, and finally he, too, began to eat seed. He and his brother are naturally not so strong and well grown

as the other four, but they are alive and healthy and I am distinctly proud of them. Even the old hen pulled through, apparently by the use of "Yadil", which, though believed by many to be a worthless quack mixture, has apparently saved me more than one Blue-wing when everything else has failed. But X had to have his final cut at the unlucky family, for one day, when she was nearly well again, a shaft of hot sunlight struck the hen through the hospital window, and I found her suffering from sunstroke, an ailment to which Blue-wings are rather prone. She is still alive and in the middle of a healthy moult, but she cannot fly. Recovery from sunstroke is a very very slow business, but I hope that in a year's time she may be well again. It would be such a sell for old X!

REVIEW

BIRD SONG¹

The author of this book is a keen naturalist who has spent much time during the past thirty-five years in studying the songs and call-notes of British birds chiefly in Sussex, one of the best districts for bird observation, with the result that he has now produced a book that will be found both interesting and useful to the bird-lover who is often very puzzled by the songs and notes he hears during his rambles. The author deals fully with the motive of bird song, and points out that although its chief objects are those of courtship and defiance, yet it may often be attributed to pure *joie de vivre*. He gives descriptive accounts of the songs and notes of one hundred and six species in the order followed in the List of British Birds prepared by the Special Committee of the British Ornithologists' Union, commencing with the Crow and terminating with the Quail. Then we find tables giving the period of the year during which the various species may be heard, and lists of those species that sing while on the wing and on the ground, those that may be heard during the night, and so forth.

¹ *Bird Song*, a manual for Field Naturalists on the Songs and Notes of some British Birds, by Stanley Morris. H. F. and G. Witherby, 326 High Holborn, W.C. 1. Price 6s. net.

Our only adverse criticism is that no index to the various species dealt with is supplied, and so when one wants to look up the song or call-notes of any particular bird it takes some time to find the bird in question.

A LIST OF COLOURED PLATES

This List, compiled by Dr. Hopkinson, forms a most useful index to the coloured plates that have appeared in the AVICULTURAL MAGAZINE since its commencement in 1894 to the end of 1925 and in *Bird Notes* from beginning to termination. It can be had from the publishers of the AVICULTURAL MAGAZINE, price 2s. 6d. post free.

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FOREIGN & BRITISH BIRDS
IN FREEDOM & CAPTIVITY

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MARCH, 1926.

THE NYASA LOVEBIRD (*AGAPORNIS LILIANÆ*)

On 11th February, 1926, arrived in London a consignment of several hundred Lovebirds, which were thought at first to be Rosy-faced Lovebirds (*A. roseicollis*). On their arrival Mr. Chapman's assistant telephoned to me that the expected collection had arrived, but that they did not seem to be Rosy-faces, and he was sending a pair to me for identification. Having always been very interested in the various species of *Agapornis*, I was excited at the prospect of seeing in the flesh a new species of this interesting genus of Parrakeets. I found without much difficulty that they belonged to a species described by Shelley and figured by Keulemans in the *Ibis* of 1894, and named after Miss Lilian Lutley Selater. The species was first noted in the district of the Upper Shire, Nyasaland, where it was found by Sir John Kirk, who believed it to be *Agapornis roseicollis*. In the *Ibis* for 1864, p. 329, he wrote: "Found in one spot, limited to about twenty miles, on the Shiré, between Nyasa and the rapids. It was never seen elsewhere, but was found there on two occasions. It is gregarious." Shelley quotes Mr. A. Whyte as follows: "Lovebirds, from Fort Liwondi, Upper Shiré river. Mr. Johnston procured several of these Lovebirds from Mr. Whicker, the collector at Liwondi Station, B.C.A. We had several of them for a considerable time in the aviary at Zomba. My own became quite reconciled to confinement, and lived for some time in a large compartment in harmony with Weaver-birds,

Gallinulas, Touracous, etc. Ultimately, however, the large-billed Porphyrios resented their presence and ill-used them and finally killed them. In its natural state this Lovebird is found in flocks on the wooded hills on the east bank of the Upper Shiré."

Writing of an ornithological expedition to the Zambesi River in the *Ibis* for 1900, the late Captain Boyd Alexander remarks of *A. lilianæ*: "We met with it first near Chicowa, again at Chishomba, some thirty miles up the river, and lastly at Zumbo. This Parrakeet frequented enclosed country overgrown with mimosa-bush in flocks which sometimes numbered as many as twenty birds, the majority of which were males.

"At Zumbo this species was fairly numerous within a small area of country, outside of which it was not found. Throughout the day small flocks would continually visit the water and travel back again, the same way as they had come, to some thick retreat among the undergrowth of acacia, and in their journey they were ever uttering their rounds of cries, almost in unison, but so shrill that they almost set one's teeth on edge.

"A half-cast at Matacania, just below Zumbo, had a number of these Love-birds in an aviary. They did not seem to mind confinement."

This beautiful Lovebird may be described as about equal in size to the West African Red-faced Lovebird. The head and throat are rosy, brick-red, brighter on the forehead, the back of the head and hind neck greenish yellow; the lower throat with a yellowish tinge. The remainder of the plumage is bright grass-green, and the tail with the inner webs of all but the central feathers red and banded with blue and black in the method common to the genus. The bill is rosy red and the naked skin surrounding the eyes pale grey.

Now that a beautiful species, quite new to aviculture, has arrived in considerable numbers, it is to be hoped that aviculturists will preserve it very carefully and do their best to breed it and retain it for many years to come, without the necessity of further importations. It appears to be a species with a somewhat limited range, and further wholesale capture may seriously threaten its existence.

D. SETH-SMITH.

THE CRYSTAL PALACE BIRD SHOW

(1) BRITISH BIRDS

By G. H. GURNEY

A very fine series of British Birds was staged at the great show held at the Crystal Palace on 4th, 5th, 6th February.

Finch-like birds were well to the fore, there being something over seventy Goldfinches exhibited, while the class for Bullfinches contained sixty-one specimens; Greenfinches and Chaffinches were also well represented, and the classes for Linnets, Bramblings, Redpolls, Siskins, and Twites showed a fine series of each. The class for Hawfinches contained seventeen birds, all very good, one being an exceptionally pale-coloured specimen. Some nice Cirl Buntings were shown, and in the same class a single, very fine male Black-headed Bunting. Twenty-seven Yellowhammers made a fine display, and in Class 142, Mr. D. A. Macpherson's Corn Bunting rightly took first prize. In the class for Pied and Albino birds were three or four very perfect entirely white Sparrows, a beautiful Pied Chaffinch belonging to Mr. W. P. Bell, which took second prize, and a nice silver Bullfinch; a very fine white Linnet, the property of Mr. W. Duffin, must also be mentioned.

The insectivorous-feeding birds were a grand lot. In Class 144, Mr. C. Tout secured premier honours with his really beautiful Nightingale, while Mr. Madduck's Blackcap was second, though there were several other Blackcaps nearly as good. Class 145 contained, amongst other interesting birds, a beautiful pair of Long-tailed Tits shown together. They were in perfect order, and belonged to Mr. W. Wolf, and took first prize, second prize in this class being secured by Mr. Hellen's Nuthatch, one of the best I have ever seen in captivity; this class also contained a single Robin and several Crossbills. In the class for Larks and Pipits the best bird was Mr. Fenton's Shore Lark, though it was run very close by the Tree Pipit and Meadow Pipit, both shown by Mr. Tout; the Shore Lark is a rarer bird.

I was surprised at the paucity of Skylarks shown, considering what a very easy bird it is to keep alive in captivity.

In Class 147 all the birds were interesting, and the first prize had been awarded to Mr. Tout's faultless, and perfectly steady, Wryneck,

Mr. G. Drowley's Goldcrest gaining a second: this bird was nice and tame, but a little rough; the third prize was awarded to a good Tree Creeper belonging to Mr. G. Rosser, while a specially sleek Black Redstart only gained a fourth. The Class for Wagtails only contained five birds, but these were all in perfect order, especially, I thought, the Pied Wagtail, which took second prize, the others being Yellow and Grey.

In the next class two Cornish Choughs were the most interesting birds, both exceptionally fine, the specimen belonging to Mr. W. Topping, which took first prize and medal, being a remarkably large bird, perfectly steady, and in the most perfect condition, not a feather out of place, and with a bloom on its plumage not often seen even in a wild specimen; in this class also were a couple of exceptionally faultless Magpies, and a nice Jay. In Class 150 Messrs. Nicholson's Waxwing took a well-deserved first; all the Waxwings in this class appeared good, but the winner was infinitely superior to any of the others, it was not only perfect in every way, but was a fine large-sized bird of an exceptionally deep rich colour. Other nice birds in this class were a very steady Ring Ouzel, a Greater-spotted Woodpecker full of life and in good feather, and a nice series of Redwings, Fieldfares, and Missel Thrushes. A fine lot of Song Thrushes, Blackbirds, and Starlings filled Class 151.

I had not time to go properly through the hybrid sections, but amongst the hybrids from two British Birds I noticed a Siskin-Linnet, a Yellowhammer-Sparrow, and many of the commoner crosses.

(2) FOREIGN BIRDS

By D. SETH-SMITH

The foreign bird section was very well supported, and the twenty-seven classes on the whole well filled. That foreign bird-keeping is becoming more popular than ever, is shown by the greatly increasing number of exhibitors.

In the class for Lories and Lorikeets, Miss D. G. Crosse well deserved her first prize for a most perfect Musky Lorikeet. Mr. Whitley took second prize with a pair of Red-collared Lorikeets, and fourth with a good Black-capped Lory, while Mr. Frostick took third prize with a fine pair of Yellow-backs.

Amongst the Lovebirds, etc., were no less than four pairs of Abyssinian, a species practically unknown to aviculture a few years ago. The best pair of these took the first prize for Mrs. Victor Cooper, the second going to Mr. Whitley, for a good pair of Rosy-faced. Other interesting exhibits were Lineolated, Tuipara, and Orange-flanked Parrakeets.

In the class for Common Rosellas, Alexandrines, etc., a very perfect Alexandrine shown by Mr. Jas. G. Adams took first prize, the class being otherwise occupied by Rosellas, Cockatiels, and Ring-necks.

In the Conure class, Mr. Whitley took the first prize with a pair of Red-headed Conures, and third with a bird that neither the judge nor anyone else could identify. More will be heard about this bird in the near future, but it is sufficient to merely state here the fact that, although none of us knew it then, this was really the rarest bird in the whole show !

Mr. Whitley again took first prize in the class for Kings, Crimson-wings, Pennants, etc., with a splendid pair of Kings, Mr. Frostick taking second with a good pair of Bauers, a pair of Pennants belonging to Mr. Shipton coming third, and a very good Barnard, owned by Mr. Whitley, fourth.

The class for all other Parrakeets was an extremely interesting one, containing as it did the specimen judged to be the rarest bird in the show, and exhibited by Mr. F. C. Hedges. This was a specimen of *Palæornis salvadorii* or *derbyana*, for there is little doubt that these two names refer to one and the same species, a very large moustached Parrakeet with a delicate plum-coloured breast. These Parrakeets are believed to inhabit Thibet, but the extent of their range is uncertain. If there is any difference between *salvadorii* and *derbyana*, it is that the former is a smaller race of the latter. In any case it is an extremely rare bird.

The second prize in this class went to Mr. Whitley for a beautiful Queen Alexandra, a second specimen of the same species taking third prize for Mr. Hedges, while Mrs. W. Reid took the fourth prize with a good Brown's Parrakeet, a very rare bird nowadays.

Amongst Amazons, etc., Mr. Whitley took first prize with a splendid pair of Plain-coloured, Mr. Frostick coming second with an equally

perfect specimen of the same species ; while in the class for Cockatoos and Macaws, Mr. Whitley's Hyacinthine was an easy first-prize winner, Mr. Maxwell's Lears coming second, a hen Gang-gang belonging to Mr. Hedges third, and Mr. Whitley's Citron-crest fourth.

In the " All other species of Parrots " class, Mr. Whitley took first and second prizes with two hen Eclectus, both in beautiful condition, Mr. C. T. Maxwell coming third with a very nice Hank-head, and Mr. Hedges fourth with a Red-cap, a pair of which were also shown by Mr. Whitley.

Quails and Doves. Mr. Whitley first with a fine pair of Nicobars, second with a perfect pair of Diamond Doves, and third with a pair of Red Mountain Doves, bred at Paignton during 1925 ; while Mr. Frostick took fourth prize with a pair of Painted Quails.

Space will not permit of my mentioning the individual exhibits in the classes for Common Waxbills, Firefinches and Mannikins, all of which were well filled, nor must I dwell upon the Grassfinch and Bunting classes. In Class 194 Mr. Frostick's first-prize pair of Violet-ears were in wonderful condition, and well deserved the first place in a very strong class ; but I think Mr. Maxwell's pair of Parrot Finches deserved more than the H.C. card which was all that they got.

The Versicolor Bunting is not as a rule an easy bird to keep in first-rate condition, and Mr. Maxwell well deserved the first prize obtained for his in Class 195, as did Mr. Frostick for his very perfect Queen Whydah exhibited in the next class.

Amongst the Tanagers was a beautiful Tricolor, which obtained first and special prizes in Class 198 ; Mr. Thurston's Superb, which came next, being nearly as good.

The class for other Tanagers, Sunbirds and Sugar-birds, contained a very perfect Mariqua Sunbird (first prize), shown by Mr. Maxwell, a Yellow Tanager (second), and a very beautiful Pretri's Tanager (third), belonging to Mr. John Frostick, while Mr. Maxwell obtained fourth with a good Copper-headed or Black-backed Tanager.

In the class for Glossy Starlings, Mr. Maxwell obtained a first prize with a good pair of Superb Spreos, while his Royal Starlings were not in very good form, and only obtained V.H.C. Mr. Whitley took second prize with a lovely cock Amethyst Starling, third with a very

good Burchell's Starling, and fourth with a pair of Lesser Red-shouldered Glossy Starlings (*Lamprocolius bispecularis*), a species he has recently bred successfully.

Amongst the Crows, Jays, Toucans, etc., Mr. Whitley came first with a beautiful Occipital Blue Pie, and third with a fine Aztec Jay, while Mr. Frostick was second with a very fine Red-billed Toucan, and Mr. Whitley fourth with a Green-billed Toucan.

Other species of Smaller Insectivorous birds contained several gems, first of which came a very perfect Lesser Niltava Flycatcher, shown by Mr. Maxwell, who also took the third prize with a pair of the very rare and curious Yuhinas, and fourth with a Blue-headed Bush Chat, while the second prize went to a pair of Indian *Zosterops*, shown by Mr. Frostick.

In the last class, which was for the larger insectivorous birds, not previously classified, Mr. Whitley well deserved the first prize he obtained for his magnificent Long-tailed Roller. Mr. Frostick came second with a pair of Donaldson's Touracous, a species freely imported recently, and third with a Golden-fronted Honeysucker, while Mr. Whitley obtained fourth prize with a Blue Mocking Thrush.

AMERICAN BIRD GOSSIP

By JAMES B. HOUSDEN

One of the most beautiful places I visited in the Gulf States (Gulf of Mexico) was Brackenridge Park, outside the city of San Antonio, South-West Texas, a real bird sanctuary.

After my arrival, almost the first night, a "dinkum" moonlight picnic was arranged in honour of the visitor from Europe.

We journeyed in automobiles to the park forest. At one part seats and tables are provided and small portable iron fire-grates with piles of cut wood are put there by Mexican labourers for the use of visitors. While some of our party were cooking and preparing supper, I went with my brother for a stroll by the riverside. The water in the river and lagoons was a bright blue, and I saw for the first time swarms of fireflies flitting among the foliage of many palm and other trees, the drooping fan-like branches of which fringed the river banks.

Like my first visit to a tropical forest, I shall not very soon forget my first stroll by this river's bank. We saw a number of Darters (*Plotus anhinga*), or Snake-birds as they are called, roosting on a dead branch of a large tree. While crowding on this branch it broke, and the birds were scattered, but soon flew up again and settled on another branch for the night. They are never molested, so are quite tame. While watching these curious birds a large river snake swam across and overhead flocks of Turkey Buzzards were flying to their roosting-places. We saw a number of birds, while new sights and sounds met the travellers at every turn. The brilliant moon came out in a southern sky, and the roaring of lions (caged lions) the other side of the forest almost reminded one of Africa.

I visited this Park several times and found it a bird-lover's paradise ; it is of vast extent, the greater part virgin forest and the resort of many kinds of beautiful birds.

A part of this park was laid out in a very artistic way as a zoological garden. The side of one of the hills had been cut away and the stone quarried for building purposes, and this formed the background of a number of cages, wired in front and the roofs thatched with palm leaves. One of the most interesting of the cages was large and contained about twenty American Hawk Owls, Eagle Owls, Virginian Eagle Owls, and other large Owls, as well as a tame Brazilian Caracara (*Polyborus braziliensis*), pure white, a most beautiful bird. In other cages were lions, leopards, various kinds of monkeys, wolves, and other kinds of animals. In another part were several African Ostriches and cages with a large number of Californian Quails, Bob-whites, Doves, Rails, and others.

One enclosure containing Pelicans was quite unique : a small lake was covered over with strong wire-netting about 12 feet high ; grape vines were growing on this wire-netting and more than two hundred large bunches of black grapes were hanging over the Pelicans' heads while swimming underneath. Grapes grow in abundance in South-West Texas.

A small herd of American Bison had a large enclosure, but usually went out of sight in a ravine during the heat of the day.

Numbers of young birds, Purple Grackles and other kinds, could

always be found bathing at a small lagoon under some trees and quite unable to fly.

This was an excellent place for bird observation, and I was never tired of visiting it. One very pleasing sight I saw while standing in the shade under a group of palm-trees: a hen Red-bird (Cardinal) came very near and settled on the ground in the sun, being joined very soon by three cock birds, looking very beautiful in their bright red plumage as they hopped and toyed round the hen in the brilliant sunshine. The friend who was with me seemed rather amused at my showing such interest. In the park the Red-birds seemed almost as plentiful as the domestic Sparrow at home.

At one part are some very charming sunken gardens, where flowers of every description abounded, and I watched brilliant large butterflies winging their zigzag flight, sometimes rising swiftly in a cloud and chasing one another, their wings flashing like sunlit jewels under a dazzling blue sky.

Some large plants were growing here with leaves large enough to cover six people and locally called Elephant's Ears and with crimson flowers, and beautiful water-lilies and bamboos 30 feet high growing in the water. I shall hope to write later more fully of the birds in this lovely tropical land.

(To be continued.)

OBSERVATIONS ON A PET SHAMA

By WM. R. H. BEARBY

Were my avicultural activities ever confined to one particular bird I should without hesitation choose a cock Shama, as I consider him unsurpassed by any cage-bird I have kept.

My present Shama was purchased from a well-known dealer two years ago, and from his incessant song, powers as a mimic, and his confiding, friendly antics he rapidly repaid his original cost and more than earns his "daily bread".

His song is worthy of careful notice and for ever interesting in its variety, and from my own observation may be divided into three parts, namely, call-notes, alarm-notes, and song proper, apparently delivered in his joy of being alive and well cared for.

The alarm notes one can associate with the spirit of combat and are uttered on sight of a Starling, Thrush, or other likely rival. Similar notes are also uttered on the appearance of a cat or other prowler.

The call-note is apparently the natural call for a mate, and in my case (not possessing a hen Shama) is uttered on the appearance of a hen Blackbird or Thrush that comes within my captive Shama's vision.

On such occasions his notes are sublime and he just bubbles over with "soul music", and under such conditions one wonders where the volume of song comes from.

The song proper is rich and powerful and exceedingly varied. It may commence with a set phrase repeated time and again, like "What-oo-Willy"-"What-oo-Willy"-"What-appeers-oo . . .", repeated until one is weary of the monotony, when suddenly a change comes with the trilling notes of Blackbird, Thrush, and other notes all bursting together.

The annual appearance in spring of a particular Blackbird on a particular tree just outside my window affords me a unique opportunity of comparing his song with the song of my Shama. The opening notes of the Blackbird are a challenge to my Shama, who immediately bursts forth and who can, literally speaking, sing the Blackbird off his feet.

There is nothing difficult about the keeping of a Shama, given a roomy cage (24 inches by 18 inches by 24 inches at least), regular feeding, and observing scrupulous cleanliness, and he should live for years in perfect health.

I find a sheet of paper cut to fit the sand tray and lightly sprinkled with fine earth and renewed daily is the best method of keeping his cage sweet and clean. The earth should be occasionally varied with fine gritty sand, as this sticks to a worm, snail, or other titbit, and the small particles taken in this manner aid digestion.¹

Shamas are great bathers and in bright weather take to water three or four times daily. Care should be taken to provide a bath at

[¹ It is doubtful whether the presence of grit with the food of soft-food eating birds is not more harmful than beneficial.—ED.]

least 12 inches by 12 inches, as this lessens the possibility of their breaking their 6-inch to 8-inch tails.

My staple diet is a well-known insectivorous food known as "Mosquito" mixed fresh daily with either water, fresh milk, grated carrot, or finely chopped lettuce.

Any garden grub, beetle, or small earthworm is a great titbit, and should be used on freshly acquired birds as a means of taming. During winter months, when garden grubs, etc., are scarce, one must fall back on the humble mealworm, of which ten to fifteen daily are apparently relished. These should be given by hand.

My Shama is so tame as to be often a nuisance, and follows me about the house in the hope of getting some titbit and uttering a very plaintive note of appeal that one finds difficult to resist.

He will share my meals with me from my plate and such things as butter, cheese, and potatoes he gets a fair share of; he is passionately fond of either cooked or raw meat, but this I allow him very sparingly, and confine him to a piece about the size of a pea once a week and raw for preference.

Being a most intelligent and confiding bird, a Shama can soon be allowed his liberty indoors and accustomed to come at call. He is most graceful in flight and an adept at "hawking" moths, house-flies, gnats, etc., etc.

He is a bold, fearless pugnacious bird, and I should imagine never associated with any birds less in size than himself and I can well imagine him holding his own with many birds his superior in size.

Another interesting observation is that of his method of breaking a very hard snail-shell to extract the contents. By arching his neck he delivers a powerful blow on the shell against a stone or other hard substance and thus quickly hammers his way to a meal.

I am in a position to procure at certain times of the year some extra large tropical and semi-tropical spiders imported into this country with bananas, and amongst these I have, more than once, had specimens of bird-eating spiders measuring 4 inches to 6 inches across, legs included. These I keep as a special treat for my Shama; his method of attacking is to hover over the spider until it starts to run and at the first favourable opportunity delivers one blow with his

powerful beak which puts the spider *hors de combat* ; he then proceeds to enjoy a meal in a leisurely fashion off legs and all.

Another peculiarity I have not seen mentioned in articles on Shamas is that all food offered is eaten, but that such things as small bones, beetle-wings and cases, feather, skin of mealworms, and in fact all food of an apparently indigestible nature is ejected in the form of pellets.

I trust that these crude but first-hand notes will result in some other aviculturist keeping at least one Shama, and I feel sure that what extra trouble in cleaning and feeding is incurred will be handsomely repaid with an incessant song rendered by a real feathered pal.

HORNBILLS

By J. DELACOUR

Hornbills (Bucerotidæ) in the Old World fill the place which is taken in America by Toucans. Like these they are provided with enormous beaks, which give them a very fantastic appearance, and with the exception of the genus *Bucorvus* are adapted to an arboreal existence ; they are fairly omnivorous, but prefer fruit and small vertebrate animals. They can easily be distinguished from Toucans by their short toes, three of which are directed forward, and by their always more or less pointed curved beaks, generally adorned with a kind of helmet. Their plumage is never brilliant, the colouring being a mingling of brown, black, grey, russet, or white, sometimes relieved with yellow ; the face is often bare and ornamented with bright colours or wattles.

They are all large birds, the smallest being about the size of a Crow, the largest that of a Turkey.

Hornbills, with the exception of *Bucorvus*, inhabit forests and are generally met with in pairs on large trees ; the noise of their flight is astonishing.

Their breeding habits are very peculiar ; they make their nests in the hollows in trees, and the male walls up his mate with mud, only leaving a hole large enough to feed her through, and bringing her food all the time that she is incubating. Hornbills are found in the tropical countries of Africa and Asia, the Philippines, and Oceania.

They do very well in confinement on a diet of cooked potato and boiled rice, fruit, and meat, but on account of their size and the special housing they require (particularly heat in winter for the most part) they are rather birds for Zoological Gardens than for amateurs. Out of about eighty existing species, twenty-three have lived in the London Zoological Gardens, and we believe these are all that have been imported into Europe. We give a list of these species, with descriptions :—

THE GROUND HORNBILL (*Bucorvus abyssinicus*), from East and West Africa ; large ; beak long and rather slender ; helmet short and open in front ; blue and red wattles ; plumage black with white flights.

B. caffer, South Africa ; resembles the preceding, but is larger ; helmet reduced in front ; red wattles.

These two are ground-loving species with long tarsi, and in size nearly as large as Turkeys.

The following are Tree-loving species having short tarsi :—

THE RHINOCEROS HORNBILL (*Buceros rhinoceros*), Malaysia, Sumatra, Borneo ; large ; beak long, yellow ; helmet large, raised, and hanging over in front, red and yellow ; plumage black, thighs, belly, and tail white, the latter with a broad black band.

B. sylvestris of Java and Sumatra ; differs from the above by the helmet not being elevated.

THE GREAT INDIAN HORNBILL (*Dichoceros bicornis*), Indo-China, Malaysia, Sumatra ; very large ; enormous orange-yellow beak, black at the base ; with large convex helmet ; plumage a mixture of black and light yellow.

Anthracoceros ; medium size ; large pale yellow or white beak, black markings ; with a very large narrow helmet ; plumage white and black. The following five species differ only slightly from each other, and have all been imported :—

THE CROWNED HORNBILL (*A. coronatus*), Indian ; MALAYAN PIED HORNBILL (*A. convexus*) from Malay, Java, Sumatra, and Borneo.

THE WHITE-BILLED HORNBILL (*A. albirostris*) from Indo-China ; *A. malayanus* from Malay, Sumatra, Borneo.

THE WRINKLED-BILLED HORNBILL (*Cranorrhinus corrugatus*), Malay, Sumatra, Borneo : medium size, white beak, with red helmet

and wattles ; plumage black, with the face and front of the neck white ; tail black and chestnut.

THE NEPALESE HORNBILL (*Aceros nepalensis*), Himalaya and Burmah ; large ; beak yellow striped with brown ; helmet small ; blue and red wattles ; head, neck, and under parts chestnut ; wings and back black, with white tips to the flights ; tail black and white. The female has no chestnut colouring.

THE ELATE HORNBILL (*Ceratogymna elata*), West Africa ; rather large ; beak thick and of medium length ; black, with a high white helmet, blue and red wattles ; crested head ; plumage black, with the sides of the neck white stippled with black ; tail white, with the exception of the two median feathers. The female has a smaller helmet, white beak, head and neck light red.

THE BLACK HORNBILL (*C. atrata*), Equatorial Africa ; differs chiefly from the preceding by its entirely black helmet and neck and less white tail.

THE CYLINDRICAL HORNBILL (*Bycanistes cylindricus*), West Africa ; medium size ; resembles *Anthracoceros* ; beak and large helmet white ; black and white plumage.

THE SUBCYLINDRICAL HORNBILL (*B. subcylindricus*), West Africa ; differs from the preceding in having a rather short beak ; a high helmet and crested head.

THE PLICATED HORNBILL (*Rhytidoceros plicatus*), Papua, Moluccas, and adjacent islands ; large ; yellowish beak ; helmet flat and furrowed ; blue wattles ; head and neck reddish ; body black ; tail white.

THE UNDULATED HORNBILL (*R. undulatus*), Burmah, Malay Archipelago, and East Indies. Differs from the above in having a paler beak, which is furrowed at the base, as is also the helmet ; yellow wattles ; head and neck white in front, brown at the back.

THE WHITE-CRESTED HORNBILL (*Ortholophus albocristatus*), West Africa ; small ; beak short and straight ; medium sized helmet ; tail very long and graduated ; black with white tips ; cheeks and large crest greyish white ; rest of plumage black.

THE ALLIED HORNBILL (*Penelopides affinis*), Philippines ; medium size ; beak and helmet also medium, red ; head, neck, and under parts

pale yellow ; cheeks and chin black, as well as the back, wings, base, and extremity of the tail, the middle of which is reddish-yellow.

THE RED-BILLED HORNBILL (*Lophoceros melanoleucus*), Angola and South Africa ; small ; long beak and helmet red ; plumage mottled dark brown ; light grey under the belly.

THE YELLOW-BILLED HORNBILL (*L. nasutus*), throughout tropical Africa ; small ; beak and helmet long, black and yellow ; plumage mottled brownish grey and white.

HOOPOES

By J. DELACOUR and M. LEGENDRE

Generally speaking Hoopoes are African birds. The type species (*Upupa epops*) visits Europe only to breed there ; and a sub-species (*U. epops indica*) inhabits Asia. These birds are of medium size, with curved beaks which are longer than the head ; they carry a crest of two rows of feathers placed parallel. Their wings are of average length, tail fairly long and square. They fly slowly with frequent and regular wing strokes.

From the first of April this pretty visitor may be seen in France along roads or in meadows, where it runs about gracefully, nodding its head so as to display the beauty of its head-dress. It lives on insects, chiefly beetles, worms, and flies, which it finds amongst the droppings of cattle. It nests once a year, almost always in a hollow tree. When the young are fledged the family still keeps together, and accordingly companies of Hoopoes can be seen walking about a meadow or dusting themselves in a sandy path. Towards the end of September, however, they become scarce, for they do not wait for the nights to turn cold before they return to the African sun.

The common Hoopoe is one of our prettiest birds with its russet black and white plumage ; its fine fan-shaped crest adorning the small delicate head, ending in a very slender curved beak. We will therefore enlarge somewhat on its management, feeling sure that the rearing of this much sought after bird can be successfully undertaken, even by a novice if he will follow the directons given here.

To domesticate adult specimens is very difficult, takes a very

long time, requires constant care, and gives little results; on the other hand, to rear nestlings, at no matter what stage of their development, is easy. The amateur must have patience, for some individuals require cramming for a few days. We have often hand-reared young Hoopoes, and up to now have always succeeded, no matter whether the birds were only a few days old or ready to leave the nest. There is no need to give them an elaborate mixture; we invariably reared our broods on bullock's heart passed through a mincer, and an insectivorous mixture.

Young Hoopoes must be fed every half-hour, giving them alternately a ball of minced meat and a ball of insectivorous mixture. They usually gape after the second or third day; it is a good plan, as with all other birds, to imitate their call. The food must be put well back in the throat because a Hoopoe's tongue is small and not particularly mobile, its beak is very delicate and care must be taken never to leave any food sticking to the sides of the mouth. It is a good precaution to wipe this with a damp rag.

Once the young Hoopoes have become sufficiently plump and eat with good appetite, we come to the point of teaching them to feed themselves. When at liberty the bird seizes its prey with its long beak, beats it several times against the ground in order to kill it, or, in the case of large insects, to detach the wings and legs, then tosses it into the air and lets it fall into its throat. The small tongue presents no obstacle.

Hoopoes must be taught to feed themselves. Caged or at liberty in a room they are cheerful, active, and above all very tame (this is a characteristic of the whole family). They continually tap the floor with their beaks and ferret into every hole: instinct is at work, they are looking for insects. From this moment they should be given only bullock's heart cut up into little square pieces. Some authors, who also recommend meat, advise cutting it into vermiform shape, but I do not advise this, because, if the bird tosses up a piece, and it falls across its beak, it cannot swallow it, and has to begin again. Before cutting up the meat it is a good plan to let it lie in boiling water for a few minutes; bullock's heart, if completely raw, is apt to stick to the beak, and is not easily dealt with.

A food vessel containing these scraps of meat should be placed in the Hoopoe's cage, and they should be hand-fed from it, this is easily done with the help of a little flat stick. The birds now require constant attention ; throw them a few mealworms, they will rush at them, play with them, kill them, and try to toss them up and swallow them. This they will find difficult at first, and the worms will fall to the right and left, but sooner or later they will get the knack of it. Some individuals arrive at it almost immediately. Throw them scraps of meat, and they will act in the same way.

When you feel quite sure that all have learnt to swallow mealworms and meat, they need not be watched so closely ; mix the worms and meat together, and then gradually diminish the worms, and leave a longer time between meals.

Their staple food should be made up, according to our experience and opinion, of bullock's heart cut up into little pieces. Besides this, each bird should be given some mealworms or other insects every day. For a change, and rather frequently, some chopped fruit, and occasionally a very little bread and milk.

Do Hoopoes drink ? Opinions are much divided on this subject. We are certain that they do, but not at all frequently. But in any case under natural conditions Hoopoes probe in very damp spots which would yield them such moisture as they need. In confinement they should be given some moss and a little water in a deep vessel. The birds will often probe there, and occasionally drink. We have never known them to bathe ; but they enjoy rolling in the dust ; in fact, this is a favourite way of passing time and preserves the beauty of their plumage.

In winter Hoopoes cannot stand either cold or too great heat ; they should be kept in a moderately heated place. Sudden changes of temperature are particularly to be dreaded. If a Hoopoe is at liberty in the house like a domestic animal, it must not be allowed to be too close to the heating apparatus, because given too fierce heat its beak will dry up, and sometimes the two mandibles remain permanently apart. This has frequently been observed by different amateurs.

Hoopoes may live several years in confinement, as long as five and six years are on record. I kept one three years ; it died from an

accident, as is so often the case with birds which are allowed liberty. They are quite ready to breed if given a hollow log to nest in, and if given daily a sufficient quantity of insects on which to feed their young.

The exotic species of Hoopoes have never been imported; they closely resemble the European bird. During the last two years, however, a small number of the so-called Wood Hoopoe (*Irrisor*) have come over; these are African birds which have long curved beaks like Hoopoes.

They have no crest, their legs are short, and tails long and very much graduated. At first they were classed in the same family as the Hoopoes, but later on as distinct, but allied; which last seems to us to be correct.

Wood Hoopoes live in small flocks in the forests, climbing trees and hunting insects in crevices of the bark; their call is somewhat unpleasing, and they have a disagreeable odour. They nest in hollow trees, and lay greenish-blue eggs.

They do well in confinement on insectivorous mixture, to which should be added insects, bread, and milk, and a little meat; they are also fond of fruit. They are much easier to feed than Hoopoes. They are harmless in confinement, and we keep them in an inner aviary together with Tanagers, Barbets, Fruitsuckers, etc. They appear to be hardy.

Irrisor erythrachynchus, which is found from Senegal to Abyssinia, has been imported; it is a handsome bird, metallic-green and blue, with purple lights; the two long central feathers in the tail are entirely steel-blue; the others are spotted with white, as are the lesser wing coverts; the beak and feet are red. Both sexes are alike, and young birds which are most frequently imported are black with dark brown beaks.

A very closely related species, *I. viridis*, found in South and East Africa, has been imported, and some specimens kept in the London Zoological Gardens lived very well.

THE NESTING OF ORANGE-FLANKED PARRAKEETS AND ABYSSINIAN LOVEBIRDS

By W. LEWIS

Having been asked by the Editor for further particulars of the breeding of my Orange-flanked Parrakeets and Abyssinian Lovebirds, I would like to say that I consider a lot of my success has been due to the fact that I have little time to watch my birds and only see them in the morning for feeding and again in the evening; the rest of the day they are left alone.

The aviary in which these birds bred is 12 feet by 6 feet by 6 feet, half covered, half open wire flight, the nest-boxes being husks, log-nests, and box-nests, the latter being 10 inches square. The occupants of this aviary last year were one pair of each Canary-wings, Tuis, Tuiparas, Orange-flanks, Red-headed and Peach-faced Lovebirds. The three last-named started visiting the nests and sleeping in them from the end of May, two using boxes and the Abyssinian taking to a large husk. None of them made any kind of nest, although they made a nasty mess of any piece of wood they could find including the frame of the aviary flight.

In the middle of June the Orange-flank hen kept to her nest, so I concluded she was laying or sitting and left her alone. To my great pleasure, on 14th August, a little head peeped out and by the 23rd I had got five fine young birds climbing about; but alas! two were killed by a Peach-face, and to avoid further trouble I removed the three remaining young birds to a flight-cage indoors, where they fed on canary millet and Quaker Oats.

With reference to colour of the young birds I did not notice much, except that they were paler than the adults and had not their bluish caps.

The Abyssinians took to a husk a little later in June and laid four eggs, which they hatched, but only reared two young, which were of the same colour as the hen when they left me three months later for another home. The young of these birds were fed on seed only by the parents and started eating seed for themselves as soon as they left the nest, and would not look at Quaker Oats

or "Viscan", a dog-biscuit meal which was offered and which most of my Parrakeets like.

In conclusion I would mention that to the best of my knowledge incubation took about sixteen days in both cases.

NOTES FROM RHODESIA

By SYDNEY PORTER

(Continued from p. 11)

Two Drongos are found in Rhodesia, the Fork-tailed (*Dicrurus afer*) and the Square-tailed Drongo (*Dicrurus ludwigi*). The latter was extremely common in the district where I was living, principally around the homesteads after the manner of the European Blackbird, and although it is called the "Blackbird" by the Rhodesians, it in no way resembles that bird.

It is about 8 inches long, and of a uniform glossy purplish-black except the wings which are sooty black. The lower back feathers are rather full, and cover the wings in repose, and are also peculiar to the touch. The head feathers are slightly elongated, and form a semi-crest. The tail is very slightly forked. The underside of the wings when the bird is in flight has a peculiarly light appearance, though when the wing is examined it appears to be a uniform dull black, but the webs are of a very thin texture, and almost transparent, and the light appearance may be accounted for by the light shining through as in the Red-winged Starling.

The legs and beak are black. The female is of a duller brownish shade.

The male has a song which he sings at dawn and even, which, although it is impossible to call sweet, is by no means unpleasant.

I have never seen this species on the ground, though I have seen it pick up terrestrial insects by flying low and hovering over the ground, but usually they feed upon insects caught around the trees. The flight is graceful, and is usually in a semi-circle from tree to tree, though at times I have seen them perform aerial gymnastics above the tall tree tops, but in general demeanour they resemble the Fly-catchers, to which birds they are allied.

The nest is a very meagre affair, made of a little fibre and placed

at the end of an upright decaying tree stem, though they also make a fragile saucer-shaped nest between the horizontal forked branches of a tree. The eggs are two in number, and resemble a small European Blackbird's egg, at least those do that I have seen, but I am told they vary greatly in colour.

The young for the first week or more are extremely fat and ugly, the skin being of a dull black colour with very little down, but when they are feathered they resemble the female.

The Fork-tailed Drongo is very similar, rather longer in size and with the tail very much forked, the central tail-feathers being about two-thirds the length of the outer ones.

The beautiful little Paradise Fly-catcher (*Terpsiphone perspicillata*) is also found around the homesteads, and also in the shady woodlands. In colour it is steel-green upon the head and crest, the rest of the body chestnut, except the under parts, which are slaty-grey.

The two central tail-feathers are enormously elongated, and are about 11 inches in length. The beak and eyelids are cobalt-blue, the legs greyish-blue.

The hen lacks the long tail and the dark green head, which is grey.

These fairy-like little birds live in pairs in the trees, sallying forth at various intervals to capture insects on the wing.

They seem to come in the spring, and disappear at the end of the summer, though I don't know for sure whether they are migratory. The nest is a most beautiful structure, small and cup-shaped, and placed on a twig or between a fork and covered with spiders' webs and lichen.

The House Martin (*Chelidon urbica*) and the European Swallow (*Hirundo rustica*) are exceedingly numerous during the summer, but they disappear in the autumn, except a few of the Martins, which remain all the year round. Their habits are the same as when they are in Europe, except that they do not breed.

In flocks of the two former birds a few Rufous-breasted Swallows (*Hirundo semirufa*) are often seen. These birds are larger than the ordinary Swallow, and are of a glossy blue-black, the whole under parts from the beak to the under tail-coverts and also the rump a deep rufous. I have sometimes watched these birds bathe in the Umsururu

River; suddenly flying down from out of a flock of other Swallows, they will rush along the surface of the water for several yards, beating up a spray with their wings, having a kind of shower bath. They repeat this performance several times, then mount high into the air to dry themselves. I have never seen the other Swallows bathe in this manner.

The South African Hoopoe (*Upupa africana*) rather resembles its European congener, but is of a deeper brick-red colour. It is found in the wooded parts in pairs or small parties. I have only seen it in the summer, though I believe it is a resident. They do not seem to be very common where I have been.

The nest is made in a hole of some sort, either in a bank or in a decayed tree or a wall. The eggs when freshly laid are pale blue in colour, but soon turn dirty white.

The Wood Hoopoe (*Irrisor viridis*), or Kakelaar as it is called by the Dutch, is a strange looking bird, and appears to have no affinity to the true Hoopoes.

It is fairly common in Rhodesia, but is rather local. It is about 16 inches in length, the tail taking up 9, and the beak 2 inches.

The head and throat are dark metallic bluish-green, the mantle, scapulars, and breast rich oil-green. The two long central tail feathers rich purple, going into steel-blue at the end. The other feathers of the tail, which is graduated, are steel-blue with two white spots, one on each web near the tip. The wings are glossy dark purple, the primaries having a white stripe across the middle, the primary coverts have the basal half steel-blue and the other half white. The lower back and lower parts underneath, black. The long curved bill and feet, bright red.

The Wood Hoopoes associate in small parties of from about four to six, and haunt the wooded parts by the rivers and streams, though I have sometimes seen them right out on the veldt. They utter a peculiar chattering cry as they fly from tree to tree. This cry is rather like that of a monkey, in fact, they are called "monkey birds" by the Rhodesians.

When disturbed the Wood Hoopoe flies on to the trunk of a tree in the manner of a creeper and runs up the bark until it gets into the branches, in fact its whole demeanour resembles that of a creeper, it

climbs about all over the trees, sometimes running upside down on the under side of a branch, all the time making a systematic search for the tiny insects upon which it feeds.

I have noticed that it is partial to dead lichen-covered trees, making a minute examination of the lichen for insects.

I know nothing of their nesting habits, though I believe they nest in holes in trees.

The Scimitar Bill (*Rhinopomastus cyanomelas*) is very much like the Wood Hoopoe, to whom it is closely allied, but it is much smaller with the long curved beak and feet black; also its habits are very similar.

Soon after my arrival in Rhodesia I was told about a bird called the "Turkey Buzzard", a large bird, some kind of a vulture with a red beak; now, people knowing that I am interested in birds, describe all kinds of weird and wonderful ones that they have seen, and in the days when I did not know quite as much about human nature as I do now, I replied that there were no such birds, only to be disdainfully told that I knew nothing about birds; now when one of these mythological creatures are described, I say nothing, but as several people used to tell me about the Turkey Buzzards, I began to think that there must be something in it, but these large black vulture-like birds "that lived in trees" remained a mystery until one day I was out with a friend, to whom I pointed out a small party of Ground Hornbills (*Bucorax capfer*) and asked him if he knew them. "Of course," replied my friend, "but they're not Hornbills, they're Turkey Buzzards," and so the mystery was solved.

These strange birds are distributed over Rhodesia in small numbers. In the district where I lived there were two small parties consisting of ten birds, five in each party, and in the one I had under observation most of the time I was there, there were two hens and three cocks.

The Ground Hornbill is glossy black in colour, with the primary wing feathers white, but this colour is only visible when the bird is in flight, the peculiar raised and pouch-like skin of the face and throat is bright scarlet, in the hen it is blue edged with red. The enormous beak and legs black. The eyelids have remarkable long curved eyelashes, which give the eye a peculiarly soft gentle expression.

I have spent many interesting hours watching these birds. They always keep in small parties, and never wander more than a few yards from each other. They are shy, and one can seldom approach within less than a hundred yards of them, they seldom take flight unless one comes upon them unexpectedly and surprises them, then they fly about a mile or so, settle, and walk leisurely out of sight, but if they see one approaching they will walk away, and if one is walking at an ordinary pace it is impossible to catch them up.

They live on the wooded veldt, usually in the vicinity of a river, stream, or marsh, and during the greater part of the day they make a systematic search of the ground for material to satisfy their voracious appetites. I have seen an individual catch and eat as many as a dozen frogs in a very short time, and yet go on searching just as diligently as ever. Nothing seems to come amiss to these birds, frogs, lizards, snakes, rats, mice, and every kind of insect; when anything is found it is tossed up into the air, caught and swallowed; of course, large things are picked to pieces.

The call is a loud boom which can be heard from a great distance.

The Ground Hornbill will perch in trees occasionally, but not often during the day, at night it roosts in the trees.

If caught young they make charming pets; a friend of mine had one which loved to play at ball with her little girl, catching the ball in its beak and throwing it back; it also used to love to come and sit on her dress when she sat on a low stool or chair.

These birds seem to breed very slowly as there are very few about, and they have few enemies, and are seldom shot. In the Union of South Africa they are protected, and the killing of one involves a very heavy fine if the offender is found. I do not know whether they are protected in Rhodesia, but if not they certainly should be, for no other bird consumes such quantities of obnoxious insects and reptiles.

I have never found the nest, but it is said to be composed of sticks, and placed on a large tree trunk, or in a large hole in a decayed tree.

The other South African name besides "Turkey Buzzard" is "Brom Vogel", which is of course Dutch.

The Ground Hornbill equals a Turkey in size.

The pretty little Cape Dabchick (*Podiceps capensis*) is usually

found in pairs by rivers, pools, or streams where the water is constant all the year round. In appearance it resembles the European Dabchick, but is a little darker in colour. If one sits quietly by the side of a river these little birds will show little fear, playing about, disporting and feeding within a few yards of one. They seem to obtain most of their food, which consists of fish, small frogs, and aquatic insects, etc., by diving, usually their catch is brought up to the surface and eaten, but at other times when nothing is brought up I conclude that it must have been eaten under the water, or that the birds did not catch anything. They can stay under the water for an incredibly long time.

I have sometimes seen an odd bird going through a peculiar display, if it can be called a display. The hind part of the body is raised higher than the front so that the lower breast and under parts are exposed from the back, then the feathers all round the tail are flattened back towards the head, so as to form a circle in the centre of which is the tail stump with the few downy feathers which constitute the tail. The effect is most peculiar, all the time the bird is swimming round and round.

When disturbed the Dabchick utters a shrill piping note.

I must relate an amusing incident that might have been a tragedy. I was watching a pair of these birds disporting themselves on a wide pool in the river, when down stream came what at first sight appeared to be a log, drifting slowly almost imperceptibly towards the birds. The seeming log was really a hungry crocodile bent on making a meal of one of the birds; nearer and nearer he came until he was only a foot or two from the birds; then, in a second, they realized. I have never seen birds so amazed before; in an instant they had dived, and came up yards behind the crocodile's tail. The huge reptile then realized that he had lost his lunch, and sank, as quietly and slowly as he had come, to the bottom of the river.

Among other water-fowl may be mentioned the Black Crake (*Limnocorax niger*), a small plump black bird about half the size of the English Waterhen. It frequents the rivers and streams, and is usually seen running over the lily leaves on the surface of the water, picking up aquatic insects, and small molluscs, etc., upon which it feeds.

The African Jacana (*Actophilus africanus*), a small, pretty, and

graceful bird, in colour a mixture of light brown, white, and black, it appears to run swiftly over the surface of the water, but is in reality running on the aquatic vegetation which lies just beneath the surface. It is an extremely shy bird, and I have seldom been able to observe it for any length of time.

The Greenshank (*Totanus glottis*) a migratory bird from Europe, is seen by the large rivers in the spring and summer, but disappears in the autumn (April). The Green Sandpiper (*Totanus glareola*) is exceedingly common and visits the cattle kraals in small parties in search of the insects, especially flies, which abound there.

The Painted Snipe (*Rostratula capensis*) is also seen, usually solitary in the marshy places and swamps in the summer.

The Avocet (*Recurvirostra avocetta*), so well known in Europe, unique on account of its strange thin upturned beak, is a frequent visitor to the large rivers, where it can be seen on the mud flats and sand banks searching for insects.

The Blacksmith's Plover (*Hoplopterus armatus*), a striking looking bird, a mixture of black, white, and lavender grey, which derives its name from its peculiar metallic cry, which resembles the ring of a blacksmith's hammer on the anvil; it, too, is found on the mud flats by large rivers.

The Wood Ibis (*Pseudotantalus ibis*) I have occasionally seen in the company of smaller fry on the mud flats. Why it is called an Ibis, or Wood Ibis especially, is a mystery to me, for it resembles a small Marabou (*Leptoptilus crumeniferus*), which bird is very occasionally seen, but both species are far from common.

Of the Heron family, many species are fairly common in the summer time by the rivers and in marshy places. The Purple Heron (*Ardea purpurea*), the little Black Heron (*Melanophoyx ardesiaca*), the Squacco Heron (*Ardeola ralloides*), the Night Heron (*Nycticorax griseus*), whose habits are not nocturnal while it is here, for it can be seen fishing in the rivers in the day and roosting in the tall mimosa-trees at night. The Red-necked Little Bittern (*Ardetta payesi*) seems to be a resident, for a young one was shot with the nestling down still adhering to its feathers, in the winter months, many miles from water. But I have never seen any trace of a nest of this species, but no doubt like the nests



D. Seth-Smith.

Nest of *Scopus umbretta*.

of most Bitterns, it would be well hidden in the reeds. The other members of the Heron family, the Egrets, I have mentioned previously.

The Hammer-headed Stork (*Scopus umbretta*), a strange bird known to most ornithologists, rejoices in many names in Africa : Hammerkop, Paddevangu, Iteguana, and other names I cannot spell ! It is very unstork-like in appearance, especially when flying, when it rather resembles a Brown Hawk.

It is common all over South Africa ; at the Cape I have seen solitary individuals standing by little pools against the roadside, not far out of Cape Town.

In Rhodesia, it is quite common, living in the vicinity of rivers and swamps ; it is a quiet and dignified bird, and will allow one to approach it quite closely, but when it thinks one has come far enough, it will silently take wing and float away, the flight being particularly light and buoyant.

Sometimes it utters a strange harsh metallic cry. One can always be sure of seeing it in certain localities usually when there is a nest, even if it is a very old one, and it seems seldom to wander far from its particular area.

It feeds by the banks of rivers and streams, pools and lakes, catching its food by wading in the shallow water, or by standing motionless and waiting for its prey to come near.

In size it is about 22 inches in length, and of a general sepia-brown in colour. The feathers of the head and nape are elongated, and give the bird a very peculiar appearance. The tail is banded with a darker brown.

The nest is most unique, and is one of the strongest structures ever built by a bird ; at first sight it appears to be nothing but a huge heap of rubbish with a hole at one side, inside the nest is circular, the floor and roof being flat and composed of reed stems of equal length and thickness, all placed neatly side by side, and cemented together with mud, looking as though it were the work of a human being instead of that of a bird. The nest is built either on an inaccessible rock or in a tree.

One nest that I saw was built in the fork of a tall tree, the angle of the fork being built up with large stems to support the base of the

nest. The nest is usually so strongly built that one can stand on it without damaging it at all. The eggs are four in number, and chalky-white in colour.

[A pair of *Scopus umbretta* bred in the London Zoological Gardens some years ago, one young bird being successfully reared in the nest figured in the accompanying plate.—ED.]

(To be continued.)

EARLY AVICULTURE

Among my books is one that I value greatly and that interests me much, for it is a record of aviculture of more than a hundred years ago, and it shows that many of the species that we deem to be rarities now were not unknown in captivity then. The title is *Portraits of Rare and Curious Birds, with their descriptions, from the Menagerie of Osterley Park in the County of Middlesex*. It is written by W. Hayes and family, who are apparently responsible for nearly 100 beautiful hand-coloured plates, which appear as bright and fresh as if recently executed, though the book was published in 1794.

The King-Vulture was there, and was considered “extremely sensible of cold, so as to be affected on the first appearance of frost, and notwithstanding the greatest care and attention it seldom survives the winter of our climate”. The West African Crowned Crane is said to have been first brought to Europe by the Portuguese in the fifteenth century; at Osterley Park it was “much delighted with being taken notice of, and was a constant attendant on those who visited this delightful spot, making the tour of the menagerie with slow and measured step; and always parting with the company with much apparent regret, which it expressed by raising the head, extending the neck, and making a hoarse, unpleasant cry”.

But the Demoiselle Crane was considered “the most pleasing bird in the Osterley collection. . . . It accompanies the visitors in their walk in the most graceful manner imaginable, and puts itself into a variety of attitudes, as if it were preparing to entertain the company with a dance”. It is interesting to note that the subject of the coloured plate, with several others, were hatched and reared in the Osterley menagerie.

The Golden Pheasant, known at that time as the Painted Pheasant, was well established and practically a domestic bird, and instances were quoted of the hen assuming the plumage of the cock. Of the Silver Pheasant we read "This, like the common Pheasant, is always wild and restless; and though in some degree reclaimed, it is never perfectly domesticated, but on every opportunity discovers a vindictive disposition, furiously attacking, with its bill and spurs, whoever approaches or enters its pen".

Of the Chinese Ring-necked Pheasant we read that "although these birds were formerly considered as very rare and valuable, there is every reason to believe that in a short time they might become as abundant as the common Pheasant". At the present time the original English Pheasant has been obliterated by the Ring-neck.

Of foreign Ducks, the Carolina and Mandarin were both represented at Osterley. Of the latter we read, "A pair of these scarce and valuable birds were a long time preserved in this menagery; and though every care and attention was paid, in the hope of having them breed, it was not attended with success."

Writing of the Great Bustard, of which a pair were kept in the menagerie, the author remarks: "They inhabit most of the open countries of the southern and eastern part of the island, from Dorsetshire to the Wolds in Yorkshire, and are frequently met with on Salisbury Plain." Yet the day of the Great Bustard as a British resident must have come to a close very soon after this.

A pair of Globose Curassows are figured, and we read that "from this pair several were bred and raised in this menagery, and in that number a most beautiful one, which, from the variety and richness of its plumage, was termed the Zebra Curasso". The rare Galleated Curassow, *Pauxis pauxi*, was also kept. Of a pair of Nicobar Pigeons we read that although given every care, attention, and accommodation the eggs were never productive, though the hen went to nest several times.

The Indian Green-winged Dove, the White-crowned Pigeon, and the beautiful Blue-headed Dove of Cuba were all represented in the menagerie. Hopes were entertained that the Cuban Doves might breed, but they failed to do so.

The Black Francolin, Red-legged Partridge, and even the Chinese Painted Quail were represented in the collection. Of the last of these we read that they "are held in great estimation by the Chinese, who train them up to fight, as we do game cocks in England". Of Parrots they had the Red and Blue and the Blue and Yellow Macaws, the Lesser Sulphur-crested and the Moluccan Cockatoos, the Blue-headed Pionus, and the Red-faced Lovebird, the Rosella, Ring-necked, and Blossom-headed Parrakeets, the Purple-capped Lory, Swainson's Lorikeet, the St. Thomas's Conure, and the Blue-crowned Hanging Parrakeet.

The Secretary Bird found a home in this remarkable collection, as did the Spoonbill and the Scarlet Ibis, the Vulturine Eagle, White-headed Eagle, and Virginian Eagle-Owl, the White Stork, the Purple Gallimile, and the Hoopoe.

The smaller birds must have been well represented too, for we have good illustrations given of the Paradise, Pintail, and Queen Whydahs, the Grenadier and Red-billed Weavers, the Paradise, Necklaced and Spotted Emerald Tanager, the Brazilian and Baltimore Hangnests. There was also the Hill Mynah, the American Goldfinch, the Blue Jay, Blue Grosbeak, Red Cardinal, and Dominican Cardinal, the Yellow-headed Marsh-bird, and the Red-breasted Meadow Starling. While of ornamental Finches there were the Java Sparrow, Green Singing Finches, Nonpareil Bunting, Spice Finch, Striated Finch, White-headed and Tricoloured Mannikin, Cordon-bleu, Avadavat, Common Waxbill, Jacarini Finch, Melba Finch, and Violet-eared Waxbill.

Considerable lack of knowledge is shown as to the locality from which some of these originated, as, for instance, in the case of the Violet-eared Waxbill, which is called the "Brazilian Finch".

D. SETH-SMITH.

CORRESPONDENCE

HARDINESS OF THE LAUGHING KINGFISHER

SIR,—One of my Laughing Kingfishers (*Dacelo gigantea*) escaped from its aviary six weeks ago, and has been at liberty ever since, enduring 20, 22, and 24 degrees of frost at night with apparent

immunity, and all efforts at recapturing it have so far proved unavailing. For some days it kept fairly close to the aviary, sitting in the tops of the tallest trees, from which it would repeatedly call to the one still in the aviary, but not even a mouse, which it dearly loves, would tempt it to come down. It spent the nights in a thick ivy tree. During the last month it has flown much farther afield, and has been seen in a wood some way off, also sitting on the top-most branches of a dead fir-tree quite close to some stacks, presumably on the look-out for mice. It takes long flights across the park, and has now become very shy, and will not allow anyone to approach within 50 yards. Several times it has been seen perching on the top of the flagstaff on the tower of the house. As far as one can see it looks the picture of health, and is apparently able to perfectly withstand the exceedingly severe weather we have been having. I suspect its food consists mainly of small birds, which it is able to catch, with possibly the addition of mice and small rats.

G. H. GURNEY.

THE ABYSSINIAN LOVEBIRD

SIR,—Would it bother you to let me know if you can tell me anything about Abyssinian Lovebirds and their nesting?

MARY C. WILLIS.

[All of the true Lovebirds (*Agapornis*) make their nests in holes in trees, lining the cavity with material such as pliant strips of green bark. In captivity they may make use of other material such as grass or fine shavings of wood. They should be provided with a large box with a hole near the top and be supplied with building material. The late Mr. Reginald Phillipps found that *A. roseicollis* carried the nesting material to the nest tucked between the stiff upper tail-coverts. So far as we are aware very little is known of the Abyssinian Lovebird in its wild state, and Mr. W. Lewis appears to be the only aviculturist who has bred it.—ED.]

CARNIVOROUS HABITS OF THE HEDGEHOG

SIR,—Last summer about 11 o'clock at night I heard a young Thrush scream on my lawn. It was a very *dark night*, so I got my electric torch, when I found a hedgehog had got a young Thrush.

Directly I touched the hedgehog it let go the bird, which ran some distance. I picked it up but could find no hurt on it. Is there any explanation of this? How could the hedgehog find the bird in the dark and how did the bird get in the middle of a large lawn in the dark?

ARTHUR LEWIS.

[A hedgehog is a dangerous animal where young birds are concerned, and will readily destroy them, including young chickens and game-birds. Very little comes amiss to it in the way of food, which includes insects, mice, frogs, reptiles, eggs, and fruit. It is also a good climber and will readily scale wire-netting, dropping down like a ball on the further side. The young Thrush, whose life our correspondent saved, was probably roosting on a low branch and when detected by the keen nose of the hedgehog and approached it fluttered to the middle of the lawn to which it was followed by the hedgehog with evil intent and the use of a keen sense of hearing and smell.—ED.]

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APRIL, 1926.

KINGFISHERS, ROLLERS, AND FROGMOUTHS

Kingfishers

By J. DELACOUR and M. LEGENDRE

The Kingfishers (*Alcedinidae*) are distributed over the whole surface of the globe, but particularly abound in the hot portions of Asia, Africa, and Oceanea. One solitary representative is common in Central and Western Europe.

The Common Kingfisher (*Alcedo ispida*) is a rather small bird, having a thick, short, dumpy body ; a large, long head, with a lengthy beak, short tail, and moderately long wings. Though its shape is lacking in grace it is compensated for by its finely coloured plumage. The upper parts of its body are wholly bluish-green, with small speckles on the head. A reddish patch under the eyes succeeded by a pure white one ; throat and front of the neck white ; the under parts are rust red ; feet red. The female is much like the male. Certain authors assert that her colouring is deeper or greener ; she only has the base of her mandibles orange red, the male invariably has a uniformly brown beak.

The Kingfisher is a solitary and lonely bird, which avoids the company of its kind and that of all other birds. It sees a rival in every other living thing, and endeavours to be the only occupant of the little hunting ground which it has selected. It cannot rise high into the air, flutter in the light of the sun, or seek its food among large trees ; by the conformation of its feet it is unable to run along the ground. It

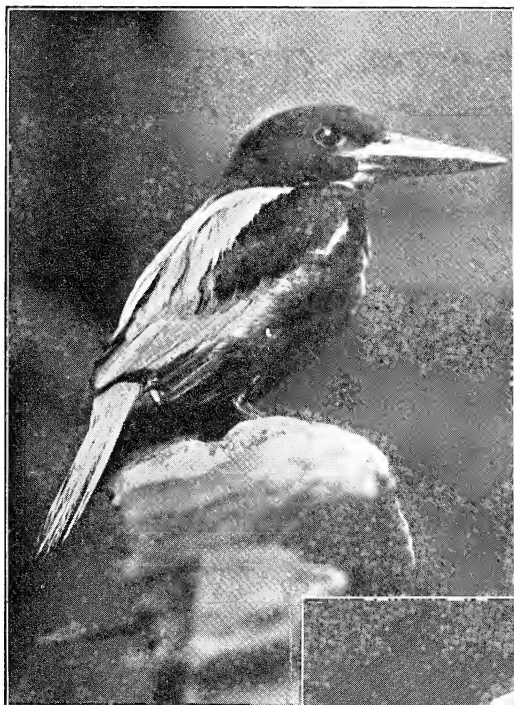
rarely walks, at most taking a few steps along a branch or stone. Its food, which consists of small fish and aquatic insects, retains it on the banks of brooks and rivers rejoicing in clear and limpid waters. Like other fishing birds, it sits silent and attentive, perched for hours on a bare branch, watching for its prey to pass ; as soon as it comes within sight the bird pounces on it with the rapidity of lightning and with the boldness caused by an empty stomach.

In the month of April it seeks its mate and during the breeding season the pair are constantly together. The eggs are laid in May, the nest being constructed in a hole in the bank of a rustic stream. This ends in a chamber which the female lines with grass, feathers, and fish-bones ; in it are laid from five to seven round ivory-white eggs. After the young have been reared the family breaks up and the Kingfisher is again a solitary individual.

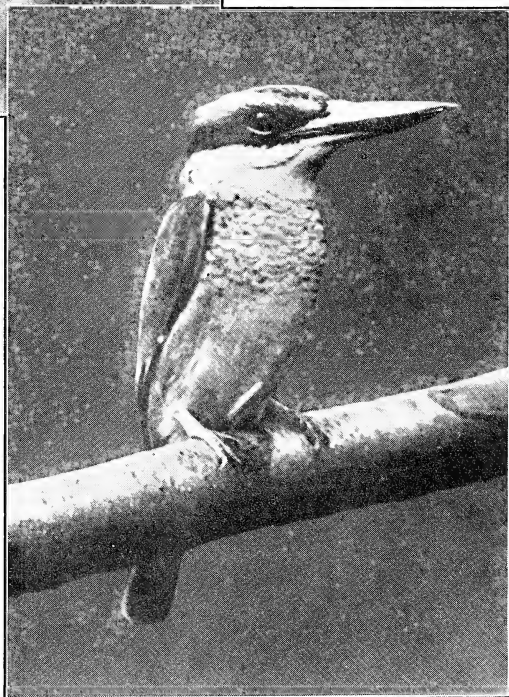
The amateur who owns a large aviary containing a stream or pool, and who can provide small living fish will find it easy to rear a young Kingfisher, for the captive is living its natural life. In this way many zoological gardens and amateurs keep them for a considerable time. We know an individual near Paris who always keeps some in confinement, as he has the good fortune to include a fishing river in his grounds. A stroke of the net brings up a quantity of little fishes, which he keeps in an aquarium and throws every day into the pool in the aviary ; when the aquarium is empty he replenishes it from the river. A few dead and leafless boughs should be arranged to serve as perches. Kingfishers are indifferent to changes of temperature.

But for the amateur who desires to keep a Kingfisher in a medium-sized cage, or even in a bird-room, but who has no small fish other than what he buys now and then from the nearest fishmonger, it is a very different matter, and fraught with difficulty. Firstly it is very hard to keep the cage and its surroundings clean, because the excreta is scattered far and wide. It is necessary to have a little vessel with a perch fastened to the side, for the food must be thrown into the water for the bird to take it. This receptacle, filled with water, must be firmly fixed in order that it cannot be upset, and deep enough for the bird not to injure itself when it plunges.

It should be fed on fish, little bits of meat, and mealworms.



**White-breasted
Kingfisher**
(*Halcyon smyrnensis*).



**Australian
Sacred Kingfisher**
(*Halcyon sanctus*).

Photos by D. Seth-Smith.

To face p. 87.]

Naturally the more fish it gets the better the bird's health will be. Failing fish, which cannot always be bought small enough, small frogs will serve. M. Plocq asserts that they readily eat sea fish, provided that they are not salted. But, in spite of every care and under the most favourable conditions, it is very difficult to reclaim an adult wild caught individual; young birds taken from the nest and hand-reared live longer, but when all is said they rarely reach their second year of captivity.

The European Kingfisher belongs to the most strictly fish-eating group of the genus. Very many foreign species are less difficult to keep, because their diet is more or less insectivorous. The large kinds of Kingfishers devour reptiles and small mammals.

A certain number of exotic Kingfishers have been imported alive into Europe. All have well-developed tails and are larger than the European species.

The Pied Kingfisher (*Ceryle rudis*), very common in the temperate and hot parts of Africa and Asia, is about as large as a Starling and has a slight crest. It is spotted all over with silvery white and black; its beak is black. It is very piscivorous.

The Large-billed Kingfisher (*Pelargopsis gurial*) is still larger than the preceding. It has a scarlet beak, very thick and long; its wings and tail are bright blue-green, the back pale blue; the top of the head is greyish-brown; the remainder of its plumage is tawny. There are many sub-species in the tropics of Asia and the Soud Islands. *P. malaccensis* has been imported once.

The Halcyons are smaller and have not quite such powerful beaks as the preceding. They live on fish and small vertebrates, insects also, which are the chief food of certain among them. Four species have been imported up to date, and did very well on chopped meat; it is as well to add insects, worms, and fish occasionally.

The White-breasted Kingfisher (*Halcyon smyrnensis*) is commonly met with from Asia Minor to Indochina. It is a very beautiful bird, having red beak and feet; wings, back and tail of a fine blue-green, bright and silky; the top of the head, shoulders, flanks, and belly brownish-red; the throat and breast white.

The Red-rumped Kingfisher (*H. pyrrhopygius*), from Australia, has

the crown of the head light blue striped with white ; wings, tail, and the middle of the back blue-green ; the lower back and under tail-coverts russet ; all the underneath parts white ; a black band runs from the beak to the nape passing through the eye ; black beak, reddish yellow feet.

The Sacred Kingfisher (*H. sanctus*) may be found from Java to Australia ; it is fine blue above, with yellowish white nape which is also the hue of all the upper parts of the body, with a black line running through the eye and surrounding the nape ; beak and feet black.

A coloured plate with an account of this species, by Mr. Seth-Smith, appeared in the AVICULTURAL MAGAZINE for April, 1900 (Vol. VI, p. 117).

H. vagans, from New Zealand, differs especially in having a very wide black mark running from beak to eye and round the nape.

The Laughing Jackasses, *Dacelo*, are very large Kingfishers, with stout bodies, enormous heads, relatively short but very powerful beaks. Three Australian species have been imported, and they are very easily fed in the same way as Crows ; meat, mice, sparrows, insects, etc. As a matter of fact, these birds are more curious than pretty ; they utter a resounding cry which resembles a noisy laugh. *D. gigas* is the largest ; its back, wings, and tail of several shades of brown and grey ; the head is white, with a brown stripe on the top and two others by the eyes. The lesser wing-coverts are marked with light blue. The beak is black.

D. leachi is smaller. It is like the foregoing, but its head is thickly striated with brown ; its wings, rump, and tail are dark blue, and the under parts variegated with dark brown. *D. cervinus* is like it, but has lighter colouring.

Of the closely allied genus, *Sauromarptis*, which is confined to New Guinea and the adjacent islands, Mr. Wilfred Frost imported five examples of *S. tyro* from Aru for the Zoological Society of London in 1921.

Rollers

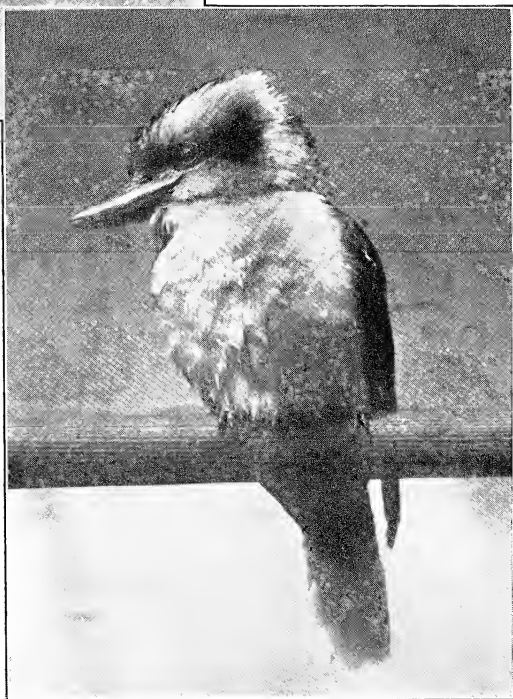
By J. DELACOUR

All who have travelled in South-East Europe, Africa, or Asia know those birds which are commonly called " Blue Jays ", but which in reality are nothing but different kinds of Rollers. They are a fairly



Aru Island Kingfisher
(Sauromarptis tyro).

**Australian
Laughing Kingfisher**
(Dacelo gigas).



Photos by D. Seth-Smith.

homogenous family, provided the curious ground Rollers of Madagascar (*Brachypteraciinæ*) are excluded. They all have large wings, coloured either light or dark blue, which make a splendid show when they fly ; some have rather long, narrow beaks and light colouring (*Coracias*), while others have short, wide beaks and darker colouring (*Eurystomus*). Rollers are purely insectivorous birds, catching most of their prey on the wing. They take up their stations on dry branches, or very often along the roads on telegraph wires or posts, flying off to catch an insect and quickly returning to the same spot. They often delight in performing extraordinary aerial antics, and fly with remarkable ease.

Rollers nest in hollow trees ; they are noisy and utter harsh cries. They live well in confinement if placed in a large aviary where they can use their wings ; their food should be a mixture (to which it takes time to accustom them) of bread and milk, cheese, and, above all, raw meat rolled in powdered insects ; mealworms and earthworms ; they are very fond of beetles.

I have nearly always kept some of these birds as I like them particularly. I have had or still possess the six following species, all of which to my knowledge have figured in our aviaries except *Coracias cyanogaster*, recently imported from Gambia by Dr. Hapemsôn.

The European Roller (*Coracias garrulus*) is pale blue ; its back is more or less greenish-chestnut.

The Abyssinian Roller (*C. abyssinicus*), which differs only in having two tapering feathers on each side of the tail.

Lort's Roller (*C. lorti*), from Somaliland, which has purple cheeks and throat.

The Long-tailed Roller (*C. caudatus*), from Central and South Africa, which has mauve cheeks, throat, and breast.

The Indian Roller (*C. indicus*), with a short tail, may be recognized by its cheeks, throat, and breast, being chestnut shot with mauve and striated with white.

All the above species have the top of the head, belly, wings, and tail blue ; and the forehead, eyebrows, and throat white.

The Variegated Roller (*C. navius*) has a very distinct uniform ; its head is chestnut, washed with purple, with nape and eyebrows white ; under parts chestnut shot purple striated with white ; wings and tail

brilliant mauve purple; tail dark green. It inhabits Equatorial Africa, Senegambia, and Abyssinia.

The Blue-bellied Roller (*C. cyanogaster*), of which one specimen has been received by the London Zoological Society, is large, with a forked tail; it has a black back, head, neck, and breast pale yellow, and deep blue belly; the tail and wings, like those of the other species, are light blue and dark blue. It is a native of Senegambia.

The Broad-billed Rollers (*Eurystomus*) are not as frequently imported; the best known are:—

The Eastern Broad-billed Roller (*Eurystomus orientalis*), deep blue shading into green, with brighter throat; the top and sides of the head blackish-grey; feet and beak red.

The African Broad-billed Roller (*Eurystomus afer*), rust-colour, shot with purple on the head and under parts; the lower belly, rump, back, tail, and flights blue. Dark grey feet; yellow beak.

The Frogmouths

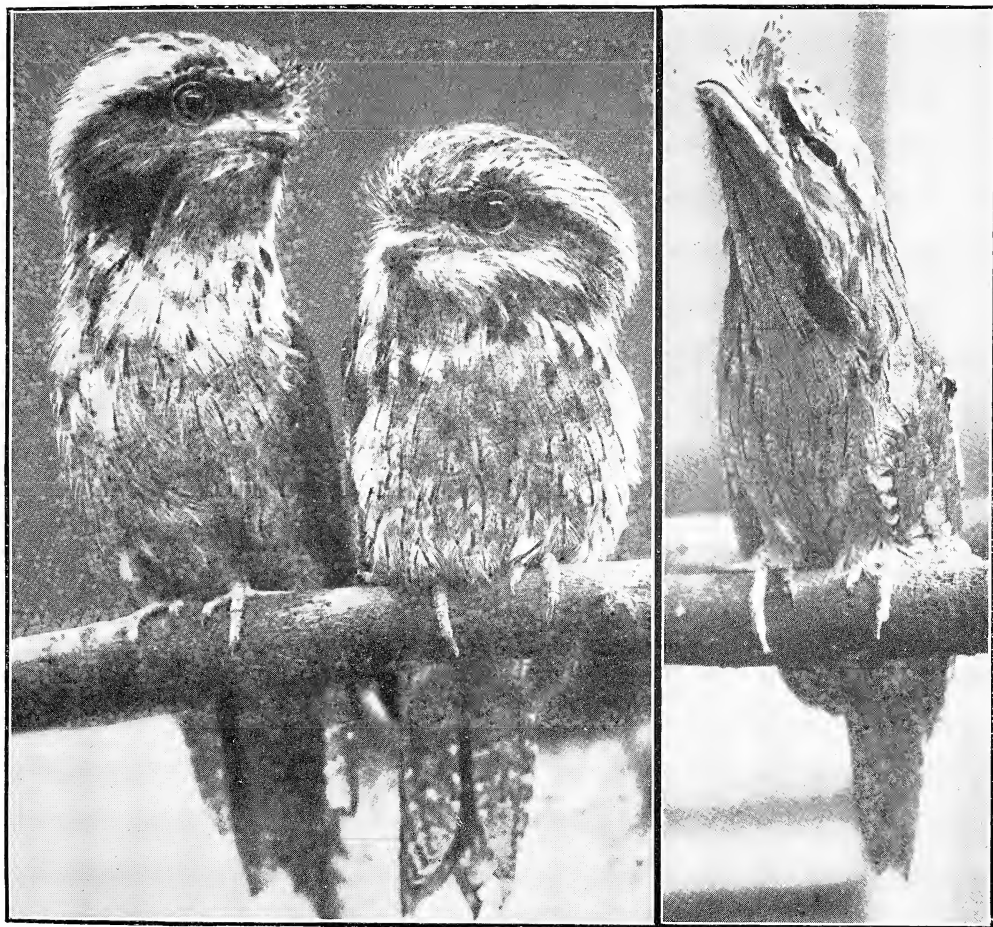
By J. DELACOUR

The species of birds which make up the family of the *Podargidæ* are among the most curious. They are nocturnal and remind one, by their brown plumage with its various and delicate markings, of the Owls and Nightjars; they are specially remarkable for their short, enormously wide, beaks, having a gape which is more like a reptile's than a bird's.

Only one species is American; the very curious *Steatornis*, which inhabits caves in Trinidad, Venezuela, and other southerly parts of South America, in which it lives all day, and rears its young. It comes out at nightfall in order to feed on the fruit of the palms, which it swallows whole with their large kernels.

The rest of the family, belonging to three different kinds, may be found in the hotter parts of Asia and Oceania. They have enormous heads and gapes. They are insectivorous birds, and hunt among the branches at night. In the daytime they stay perched with their bodies placed vertically and blending with the bark.

Some years ago three specimens of the Australian Frogmouth (*Podargus strigoides*) were obtained by the Zoological Society of London.



D. Seth-Smith.

The Tawny Frogmouth (*Podargus strigoides*).

[To face p. 90.

They were installed in an aviary provided with large branches, and fed on chopped-up meat, mice, and a few insects, they proved very healthy, and are still there.

This species is light greyish-brown, striated and mottled with dark brown ; it is about the size of a Tawny Owl.

NOTES FROM RHODESIA

By SYDNEY PORTER

(Continued from p. 80)

The dainty Crowned Plover or Lapwing (*Stephanibyx coronatus*)¹ is very common in certain localities in Rhodesia, and is rather a nuisance at night if one wishes to sleep as it seems to be both diurnal and nocturnal, and when it sleeps is a mystery. In the day it plays about, feeds, and has little impromptu meetings ; at night it seems to spend its time in running about or flying round and round, all the time giving vent to a variety of extremely loud plaintive cries. Most of the night seems to be given up to this form of exercise for no apparent reason whatever.

A little party of these handsome Plovers lived around the hut of a friend of mine, and as they would come quite close up, I had good opportunities of observing them, through the ever-open door, over the breakfast-table.

They seemed to thoroughly enjoy life, both in the day and at night. This little party usually had a Double-banded Courser (*Rhinoptilus bicinctus*) in attendance, and he (or she) was on the most friendly terms with the Plovers ; he would attend the meetings, going up to each bird in turn and watching with great interest anything that they did.

In the mating season the birds go through a short, but strange display. Immediately after mating has taken place the cock and hen come up to each other with short dainty steps, stand side by side, so that they touch each other, then they each raise the outer wing to its full extent and expose the pure white under wing. This form of display, which may be endearment, only lasts for a few seconds.

It is rather unusual for these birds to haunt the environs of a home-stead. They usually prefer to frequent the open veldt, but my friend,

[¹ An illustration of this handsome Plover appeared in our Magazine in September last.—ED.]

who is interested in birds, protects them and all other birds. They seem to know this and flock around his place, and usually in the feathered throng one sees many rare and interesting birds.

In colour the Crowned Plover is pale olive-brown on the back and wings, a spot in the centre of the crown is black; this is surrounded by a broad white ring, and this in turn is surrounded by a broad black edging that terminates in a point on the nape. The upper breast is pale brown, and below this is a black line which divides the brown from the pure white under parts. The upper tail-coverts white, also the tail which has a black band near the end. The wing coverts are mottled with white. The beak and legs are a beautiful rosy pink. The whole contour of this bird is extremely graceful, and the colours clear and well defined.

In the marshes or on the veldt by rivers the Wattled Plover (*Lobivanellus lateralis*) is very common, and is even better known than the previously mentioned bird. Its colours are the same, but the arrangement is different; the beak and long, thin legs are a beautiful willow green colour and between the eye and the base of the beak is a wattle about three-quarters of an inch long of the same green colour, with an orange spot near the tip.

Its habits are very much the same as those of its near ally the Crowned Plover, but it seems to prefer the damper places. It is just as garrulous both in the day and at night, but the note is different; also when it is disturbed it will circle round uttering its cry.

I have been in the breeding grounds of both birds, but have failed to discover either eggs or young. The flight of both species is light, airy, and buoyant in the extreme.

The only member of the Psittacidæ that I have seen in Rhodesia is the pretty little Meyers Parrot (*Pæocephalus meyeri*), which is far from common. It is found on the wooded veldt, usually in small parties or in pairs.

In colour it is sooty brown, with a yellow frontal band, the edge of the wing and under wing-coverts being bright yellow, the abdomen bright bluish-green, the lower back and tail-coverts light blue, the beak and legs dark brown, and the naked skin round the eye black. The length is about 9 inches. The male and female are similar. The

whereabouts of these little Parrots can usually be detected by their shrill cry, which they utter at frequent intervals as they feed. They are partial to the m'harsh trees. These trees, or at least the female tree, bears a fleshy fruit, which looks something like a small new potato with a large stone inside ; it also has a most peculiar astringent taste. This fruit they are very fond of.

The colour of the Meyers Parrot harmonizes so well with the foliage of the trees, that it is almost impossible to see it when feeding in a tree. I have been underneath trees which have contained several of these birds, and have had to watch for half an hour or more before being able to discern them ; all the time they sent down a perfect rain of pieces of fruit and stones, and every few minutes uttered their shrill cry.

Usually these birds are exceedingly shy and wary and are very hard to approach, but if one gradually approaches them and the birds see that no harm is intended, they can be watched from quite close quarters.

Young Meyers Parrots are sometimes caught by the natives and sold to the white people, who usually feed them upon hard maize, which soon ends their career on this plane ; if they manage to survive they make delightful pets. The flight of the birds, though in a degree rather laboured, is exceedingly swift. Besides feeding on the m'harsh fruit, they eat many other kinds of wild fruit and berries.

When at Cape Town on my way to Rhodesia I saw a cage full of a nearly allied, but most beautiful Parrot, namely the Rueppell's Parrot (*Pæocephalus rueppelli*). I would certainly have bought them had I been on my homeward journey.

The pretty little Golden-breasted Waxbill (*Estrelda subflava*), so well known to aviculturists at home, is fairly common in Rhodesia, though it is never seen in the same numbers as the Common Waxbill (*Estrelda astrilda*). It frequents the marshy lands or the veldt that borders the rivers or streams where the grass and reed seed is plentiful, upon which it feeds. It breeds all the year round, except in the worst part of the rainy season. If in the summer or autumn it nests in the Mexican Mangolds on the ant-hills, like the Scarlet Weaver, making a pouch-shaped nest, woven of the finest flowering grass-heads, between two or more stems of

the mangolds. The nest is very much like that of the Weaver, but is smaller and finer. If it nests in the winter and spring, when the mangolds are dead, the nest which is of a much firmer and thicker construction, is built in the thick matted dry grass, sometimes almost on the ground. The tiny white eggs, not much larger than elongated peas, are five in number; the male incubates as well as the female.

Sometimes in the thick undergrowth and reeds by the rivers is seen that strange and illusive bird, Levillant's Cuckoo (*Coccytes cafer*). About the size of the European Cuckoo, but more slender in build, glossy greenish-black in colour above, a white band on the wings, the tail tipped with white, the under-surface white, the throat and chest being streaked with black; also the sides and flanks. The head feathers are elongated, and form a long, pointed crest.

This Cuckoo is a migrant, arriving in the late spring and leaving in the autumn. It is shy and retiring, and will not tolerate observation from a human being; as soon as it sees one it slips away into the undergrowth or reeds. I have only seen solitary specimens, and owing to its timidity have been unable to find out much about its habits.

This Cuckoo feeds upon insects, principally the poisonous hairy caterpillars, which no other birds will touch, and in that way is of great economic value. No doubt it is parasitical, like its near ally the Black-crested Cuckoo (*Coccytes serratus*), but nothing seems to be known for sure in regard to its breeding habits.

The family of Shrikes is well represented in South Africa, there being about thirty-five different species, and many of these are inhabitants of Rhodesia. The Mozambique Shrike (*Dryoscopus mossambicus*) is fairly common, and is found in small parties in the bush bordering the rivers. It is not very striking to look at and in colour is an arrangement of black above and a pinkish creamy white below, with white markings on the wings.

One is at once attracted by the calls of this bird, which are quite unique. The most familiar is a loud single note, which can be imitated by making a loud "Oh" in the throat with the mouth open. This call is made at intervals of a few seconds, and can be heard from quite a distance. Another cry is something like "you—er", "you—er", half whistled, and in the middle of each note is another sound, like a

harp string being plucked. This is very metallic and staccato, and both sounds are uttered simultaneously; it seems as though the bird had two vocal organs, and at first I couldn't believe that the sound could be made by a bird, until one day when I was sitting hidden in the long grass by the side of the Umsururu River one of these birds came quite close, and I was able to see and hear it.

Then there is the Long-tailed Shrike (*Urolestes melanoleucus*) that has also great vocal powers; in fact, most of the South African Shrikes are noted for their loquacity. This bird has a very loud chattering cry, and unlike the Mozambique Shrike is fairly tame and confiding. At first sight it rather recalls a Whydah, about 18 inches in length, the tail occupying from 12 to 13 inches, dull black in colour, the feathers of the head being lanceolar in shape. The scapulas, which are elongated and cover the back, the tips and basal half of the flight feathers, the tips of the tail and secondary wing-coverts, and also a few of the flank feathers, white.

This bird lives in small parties on the bush veldt, and is seldom seen in the immediate vicinity of rivers, but prefers the dry sand veldt. It frequents the neighbourhood of old native kraals where the vegetation is luxuriant and is conducive to an abundant supply of insects, upon which these birds feed. The nest—which is very unlike the usual neat nests of the Shrike family—is a bulky and rough affair, placed at the top of a tall tree.

The Lesser Puff-back Shrike (*Dryoscopus cubla*) is found around the homesteads and is known at once by its peculiar note, which resembles a whistle blown at frequent intervals, hence its local name—"The Policeman's Whistle".

It is a very small bird for a Shrike, less than 6 inches in length, and is a mixture of grey, black, and white; the lower back feathers, which are white, are elongated and very full, and the bird is able to puff these out so that it resembles a ball; no doubt these feathers are used in the courting display. The nest is a most beautiful structure, made of the finest grass and so bound round that no ends are visible, and covered with cobwebs from a giant spider's web. The strands from these great webs, one of which I measured was 15 feet high and 12 feet broad, are in great demand for the building of nests, the threads

being so strong that if a dozen are plaited together it is impossible to break them. Once I found a Flycatcher (*Hyliota rhodesiae*) entangled in one.

I have only seen two species of Crane in Rhodesia, namely the Wattled Crane (*Bugeranus carunculatus*) and the Crowned Crane (*Balearica regulorum*). The former is, I think, comparatively rare, and I have only seen solitary specimens flying over at a great height. It is a large bird, the largest of the African Cranes, and is grey and white in colour. The latter is quite common, and during the summer a pair can usually be seen by any large sheet of water or in the swampy reaches of the rivers. They spend their time searching for insects, mollusca, and crustacea, upon which they feed. The two birds usually seem devoted to each other, and seldom wander far away. Sometimes they indulge in a strange dance, more often than not one bird will perform for the benefit of the other, but occasionally both birds will take part in it. During this dance the birds seem to lightly hop and skip about on the tips of their toes, with outstretched wings and bowing necks; nearly always they face each other.

These birds are shy, and it is impossible to approach within several hundred yards of them. Their gait is extremely graceful and stately, and their flight easy, light, and buoyant. Sometimes they will come into the cultivated lands and feed upon the sprouting grain, and are consequently shot by the farmers. I am afraid that the Rhodesian farmers, in common with those at home, imagine that if any bird is seen in the grain fields it is necessarily feeding upon the grain. This is a great fallacy, for the chances are a hundred to one that it is feeding upon the obnoxious insects, though the present case is perhaps an exception.

The Crowned Crane builds its nest in the tall reeds and grasses in the marshes or swamps. It is a bulky structure, composed of reeds well trodden down, and rather resembles a Swan's nest. Two bluish-white eggs are laid, which soon become stained by the damp vegetation of which the nest is formed. A pair of these birds nested every year in the marshes by the Umsururu River, but they always failed to bring up any young, for their eggs were always stolen either by niggers or white people. The male of this pair, poor fellow, had a hanging leg, it having been broken by a shot, but he danced just the same on his one remaining

leg. The colouring of these birds is well known to all aviculturists, so that a detailed description is rather futile, sufficient to say that the bristle-like crest or crown and the beautiful pink cheeks render this bird unique.

Many years ago the Southern Ostrich (*Struthio australis*) wandered in great numbers over the drier parts of South Africa; now, alas! its numbers are greatly diminished, and it is comparatively scarce. Small numbers are still found in the wilder parts of the Union of South Africa, in the Kalahari Desert, in Bechuanaland, and in rapidly decreasing numbers in Rhodesia.

The Ostrich has three great enemies, namely the nigger, the white man, and the jackal. The nigger takes the eggs and kills the young for food; the jackals also kill a great number of young Ostriches; the white man kills because it comes into the mealie lands and causes great havoc with the crops. An Ostrich that a friend of mine shot had thirty-six mealie cobs in its crop, so that one can imagine the damage that a flock would do to a crop. The white man also kills for the feathers and for sport, though I have never yet been able to understand why wanton slaughter, no matter whether of Ostriches, Pheasants, or Doves, should be called sport; but no doubt it satisfies some primitive blood lust which is instinctive in some people.

On the estate where I stayed there were four wild Ostriches, one male and three females. All four were extremely shy, but they could be easily observed if one hid behind the stones on the top of a kopje. Usually their movements were slow and leisurely; they moved along cropping the grass or herbage, but upon sighting a human being they would set off at a steady run. Once I was fortunate enough to witness a display of the cock bird. Two hens were feeding with the cock when the other hen came in sight; when she was about three hundred yards away the cock swelled out his throat and neck, and gave vent to a series of loud "Ohs"; after this he opened his wings, pressing them against the side of the body so that the tips of the white plumes of each wing met over the back. With the wings like this he ran several yards and then brought the wings to the normal position again. Then, advancing several more yards, he knelt down, the body being inclined forwards. Then he opened his wings at right angles to the body, and

moved each one alternately with a rowing motion, the wings resembling great waving fans. This performance was repeated *ad lib.* until he reached the hen, who stood rather unconcernedly, her body tilted forward and her wings hanging down in front of her legs. After it was all over the cock walked away with his wings folded over his back!

The male wild Ostrich seems to differ slightly from the tame one in having the tail feathers dark greyish-brown, whereas the tame one has the tail white. The birds mentioned laid every year, but the eggs were always taken by niggers. Sometimes I have seen stray wanderers, either cocks or hens, out on the veldt passing from one part of the country to another; these birds are extremely shy.

Of the various species of Whydah-birds inhabiting Rhodesia I have only seen two, the Red-collared Whydah (*Coliuspasser ardens*) and the Pin-tailed Whydah (*Vidua principalis*). The former, which is not very common, inhabits the vicinity of rivers and marshes, where the dense reeds grow. The males are usually very much in evidence, where they are found either perched on the tops of tall reeds or trees or some other point of advantage, where they form a conspicuous object. The hens are seldom seen, as they frequent the undergrowth, and their unobtrusive colouring renders them difficult to discern. The male is deep silky black, with a crescent-shaped collar of scarlet on the upper breast; the tail feathers are enormously elongated and look like narrow black ribbons tied on to the bird.

I have frequently seen it stated that the long tail feathers hinder the bird in its flight, especially during the rainy season, but I have never found this so; during the rainy season of 1924-25, which was the wettest season on record for Rhodesia, and when 2 inches of rain was very often recorded in an hour, I saw these birds nearly every day and the rain never seemed to hamper them in any way; indeed, their flight always seemed much easier and more buoyant than that of most other Weavers.

The other Whydah is found around the homesteads and is one of the most conspicuous of all the birds that frequent the environs of the homesteads during the summer. It consorts in small parties, consisting of about a dozen or more hens and one or two cocks. It is always found in the vicinity of fowl-runs, stables, or anywhere where it may

find stray corn or mealie meal. Sometimes the males will indulge in aerial gymnastics; from the top of a tall tree they will shoot straight up into the air for some yards, make a series of twists and turns, and then come down head first, the long tail feathers streaming behind.

In the winter when the males are in undress plumage they associate in flocks, and frequent the grasslands, cultivated fields, and farmyards; but they are shier then than when in breeding plumage. This bird is so well known that a description of the plumage is quite unnecessary.

There seems to be few gallinaceous birds in Rhodesia. I have only met with five, namely the Coqui Francolin (*Francolinus coqui*), Shelley's Francolin (*Francolinus shelleyi*), Humboldt's Francolin (*Pternistes humboldti*), the Cape Quail (*Coturnix africana*), and Crowned Guinea Fowl (*Numida coronata*). The first mentioned is common owing to its habits of frequenting the thick grass and bush veldt, where it lives in small coveys, feeding upon bulbous roots, tender shoots, and all manner of small insects and seeds, etc. When disturbed it runs for a short distance, and then takes wing; its flight is exceedingly hard, but extremely rapid. It is one of the most beautiful of the Francolins. A detailed description of the plumage would fill a page, so that I will only give a general impression. The whole of the head, neck, and throat bright yellowish-buff, washed with greyish-chestnut on the crown; the breast and under parts creamy white, heavily barred with black, the markings becoming less pronounced on the lower parts. Some of the long flank feathers have a chestnut spot on. The upper parts are the usual Partridge colour, a mixture of browns, black, and grey. The base of the beak bright yellow, the rest horn-colour. The legs are also bright yellow. The hen is different, altogether of a paler colour and she has a white throat, and the barring of the breast is less defined. The local name is Iswempe (pronounced "swimpy"), which is of Zulu origin, and is derived from the bird's call, which is usually uttered in the morning and evening. This call is loud and penetrating and consists of "Swimpi, swimpi, swimpi", uttered a great many times.

Shelley's Francolin is about twice the size of the previously mentioned bird, and is often found consorting with it. Above it is the usual Partridge colour mentioned previously; on the upper parts, the throat is white, bordered by a band of black and white feathers, the

crown black, each feather edged with buff. The ear-coverts pale buff, a black and white stripe runs from the eye to the base of the neck, the upper breast mottled chestnut and white, the lower breast feathers white with transverse bars of black. The flank feathers, which are elongated and cover the wings in repose, have the end portion of one web chestnut, and the other mottled black and white and chestnut. The legs are flesh-coloured, the beak horn-coloured, darker at the tips. The hen is somewhat similar, but paler in colour, and has the throat creamy white, and the stripe from the base of the beak running over the eye to the base of the neck creamy white mixed with black. The upper parts are washed with grey and the breast markings are less pronounced. She has no spurs.

Humboldt's Francolin is a much larger bird still, being about as large as a fowl. This bird is partly aboreal as well as terrestrial, and is often seen in trees, especially the males. It frequents the thick bush near rivers, and is seldom found in the open like the other two, but is not nearly as numerous. The cock has a loud crowing note, which he utters when in a tree. The general colour is dark greyish-brown above, the throat is naked, also a patch round the eye. This is brilliant red, the neck, breast, and sides black and white, being striped longitudinally. The centre of the abdomen is black, the legs and beak bright red. The flank feathers are very long. This strikingly looking bird is more or less confined to Rhodesia, where it was once extremely common, but now, owing to persecution, it is getting far less so.

The Crowned Guinea Fowl is quite common, and is found in flocks in the thick bush, usually by rivers; it is wary and shy and very difficult to approach. It very seldom takes to the wing when disturbed, but runs at a great speed. In most ways it resembles the domesticated Guinea Fowl, but is black instead of grey, the spots also being larger. It is very regrettable that this bird is extensively shot, for it is of great economic value, destroying an immense amount of objectionable insects that infest Rhodesia and at times make life unbearable. It feeds upon the maggots of the dreaded tse-tse fly (the cause of sleeping sickness) and other pest-carrying insects.

The Cape Quail is common in Rhodesia, especially during the summer. It differs very slightly from the European Quail. A native

once brought me two young ones a few hours old ; he had killed the mother, and succeeded in capturing two of the chicks. They were the tiniest little balls of fluff, and it looked rather hopeless to try and rear them, as they were half dead ; but I managed it, keeping them in a box with a hot-water bottle in, and feeding them upon chopped egg and mealie meal at first, which had to be forced down, and afterwards upon ropoka, various grass seeds, and the larval form of a small species of grey ant that abounds in Rhodesia. They grew up into fine birds, a cock and hen. The latter died for some unaccountable reason, and I let the cock go.

I have seen other species of Quail, but I am not sure of their species.

The pretty little Kurrichane Hemipode (*Turnix lepurana*) is often mistaken for a Quail, a bird which it superficially resembles, but on close examination it will be found that it is quite different in shape. While the Quails are more or less rotund in shape, the Hemipodes are ovallanceolate in form. The neck is longer and the head smaller ; they will be found on close examination to lack the hind toe. The Hemipodes are unique owing to the fact that the hen is the larger and brighter of the sex, the male performing the duties of incubation, etc.

The Kurrichane Hemipode lives on the grass veldt, and is partial to the edges of cultivated lands, where it associates in small parties. It is seldom seen away from the thick grass, so is not very well known. It feeds upon seeds of grasses and various plants, and also upon insects. It is about $6\frac{1}{2}$ inches in length. Above it is chestnut and black, the feathers edged with grey. The throat silvery cream, the feathers tipped with black. The feathers at the side of the neck and breast black edged with cream. The centre of the upper breast light yellowish russet. The lower parts silky white ; the flanks light chestnut ; the flights grey ; the larger wing-coverts a mixture of chestnut, black, and white ; the tail feathers, which are very meagre and soft, are a mixture of browns ; the lower tail-coverts light chestnut ; the beak is leaden blue ; the feet yellowish brown. The female is very similar but brighter in colour.

BREEDING OF THE BEECHEY JAY (*XANTHURA BEECHEEI*)

By ALBERT SUTCLIFFE

When the late Mrs. Dalton Burgess's collection of birds was offered for disposal, I was fortunate in procuring, amongst others, a very nice pair of these Jays. Mr. Hedges, who, I understand, had been assisting Mrs. Dalton Burgess for years with her birds, informed me that they had on several occasions in the previous year attempted to breed. When the warm weather came in the spring of 1925, I decided to give this pair an aviary entirely to themselves, and I fixed up a number of suitable nest sites, well concealed from view. Almost immediately after I put the Jays into the aviary, they selected the fork of an old tree covered with brushwood nailed high up in the corner of the flight. Here they commenced building with pieces pulled off a plant of honeysuckle, and small twigs. They lined the nest almost entirely with root fibres, discarding all other materials supplied. Within a few days of the nest being completed the first egg was laid, which I had a peep at by using a ladder on the outside of the aviary. The egg was nearly oval, and about the size of an ordinary Jay's egg, being a beautiful russet-brown colour, marked with darker spots and blotches. Altogether three eggs were laid. After incubating for ten days, one of these was missing; the other two hatched out, I think, on the fifteenth day, and the young were duly fed on cockroaches, nestling sparrows, and mealworms for a week, when to my great grief both of them were thrown out of the nest. The cock bird amused himself by banging their heads on the door leading to the sleeping quarters.

They went to nest again, but whether more eggs than one were laid or not, I cannot say. The hen bird sat for a considerable time, and eventually I had a look and found the nest empty; I therefore came to the conclusion that father had been busy again. I searched the aviary all over for any remains; the only thing I could find was a leg, but whether it belonged to the first brood or the second, I cannot say.

After this exhibition of cannibalism, I began to think my chances of rearing this beautiful Jay very remote, and practically gave up hope, as it was now the middle of August and the summer in Lincolnshire

nearly gone. However, they relined the nest and commenced again, laying three eggs. On the fifteenth day from the hen bird commencing to sit she duly hatched out three youngsters. At this time I had a friend whose stores were infested with mice, and who regularly supplied me with six to twelve every day, and as these were taken in preference to mealworms or any other food I could find, the young birds grew at a surprising speed. Moreover, these very shy birds commenced to act in a quite different manner. Instead of getting out of my way and concealing themselves in every possible bush, they came screeching and scolding every time I went near the aviary. They seemed almost to beg for more mice and still more; in fact, they became so extraordinarily tame that I could actually touch the hen bird when giving her a mouse. As soon as she had got it, the cock bird would scold me as hard as he could until I was out of the aviary, as much as to say, "You dare touch my family." This, of course, was very encouraging, as I knew by their attitude they meant business this time. At a week old the young ones were covered with a very dark soot-coloured down, and possessed what first appeared to be an enormous crest. On the twelfth day the largest young one left the nest but, of course, was quite incapable of getting about the aviary. I put it back in the nest, but it was out again in the afternoon, and as it was rather a wet evening I moved it into the shelter. The thirteenth and fourteenth days saw the other two birds out of the nest, and also put into the shelter, where all three birds remained for three weeks before they were able to get about the aviary. The plumage on leaving the nest was: head and body, sooty black; back, pale bluish-grey. What appeared to be the aforementioned crest, turned out to be an extraordinary formation of feathers, growing from above the eyes, and standing straight up, cockade fashion, over the beak. This crest at the end of December was still standing up well over the beaks of two of the birds. The third, which is much smaller than the others, and I believe a hen, has almost entirely lost this crest, it having become quite flat over the head.

At the present time the beak and legs are a pale flesh colour; back and tail bluish grey. All three birds are now healthy and strong, and are quite capable of tearing to pieces and devouring a mouse or small rat without the assistance of their parents.

THE BIRDS AT COURTLANDS

MISS D. G. CROSSE, F.Z.S., F.B.S.A.

Members at any time in the neighbourhood of Beaconsfield should make a special point of visiting Courtlands, the home of Mr. F. G. Hedges, F.Z.S., M.R.A.O.U. Although Mr. Hedges has only been there a short time, he has made remarkable progress with his aviaries, and when they are finished they will most certainly be numbered amongst the finest in the country, and it will be hard to find anywhere aviaries better adapted for the acclimatization of foreign birds.

The position is almost ideal, well removed from a main road and standing on the edge of a large beech wood. All the aviaries and bird-rooms are built in sections for easy removal. There are three aviaries with open-fronted shelters, 4 feet wide, 4 feet deep, 6 feet high front and 7 feet high back; the flights are 12 feet long, 4 feet wide, and 6 feet high, $\frac{1}{2}$ in. mesh wire-netting being used. The inhabitants of these three are as follows :—

(1) Three Pileated Jays (*Cyanocorax chrysops*), two hens and a cock. One hen laid last year, but the cock persisted in dancing on the side of the nest and eventually succeeded in overturning it, the eggs being broken.

(2) A fine cock Yellow-naped Parrakeet, the rare northern variety (*Barnardius occidentalis*), and a hen Yellow-naped (*B. semitorquatus*). This pair successfully reared two young last year.

(3) Nine Java Doves, four of which were bred last year.

Adjoining these aviaries are six smaller ones; the houses of which are 6 feet wide, 4 feet deep, same height as the previous ones. A large window of rose glass is fitted in the front of each, the floors throughout are of concrete. The flights are 9 feet long, 6 feet wide, and 6 feet high. These are occupied by various shades of Blue Budgerigars, Cobalt, Lilac, Blue, Grey, etc., some fifty pairs, all flying in the open and all in exceedingly fine condition. Facing this range is a similar one, as yet unfinished, but destined for more Blue Budgerigars.

Mr. Hedges has probably bred more Blues than anyone in England, and is undoubtedly the originator of the Cobalt Blue, although various unfounded claims are made abroad. As well as the above, there are

small flocks of Apple-greens, Jades, Olives, Yellows, and Greens. A nice pair of Whites were also bred last year. Besides these there are two larger aviaries, with houses 12 feet wide, 4 feet deep, height as before; the flights are 12 feet wide, 24 feet long, and 7 feet high. Here are quartered the experimental Budgies, every conceivable cross and variation, but as yet no Cinnamons!

The various bird-rooms are next visited, and amongst others are the following birds, mostly in pairs: Temmincks Blue Thrushes, Orange-headed Ground Thrushes, Spree and Glossy Starlings, Troupials, Shamas, Pekin Robins, Racket-tailed Drongos, African Rollers, Slaty-headed Scimitar Babblers, Dials, Yellow-shouldered Whydahs, Golden-fronted Fruitsuckers, Masked and Denemelli Weavers, Red-headed Parrot Finches, Abyssinian and Nyasa Lovebirds (*Agapornis lilianæ*), Senegal Parrots and Guiana Parrotlets. In his study Mr. Hedges keeps his few especial pets. The famous *Palaeornis salvadorii*, winner of the Foreign Bird "Grand National" at the recent Crystal Palace show, of course takes pride of place; a very nice cock Princess of Wales Parrakeet, a cock Redcap Parrot, and a hen Gang-gang Cockatoo (bred by him in France for the first time in Europe). Another rarity, this unfortunately, however, a stuffed specimen, is a Pesquet Parrot, the cock bird of a pair imported by Mr. Hedges for the late Mrs. M. A. Dalton-Burgess; it might be mentioned that this is the only pair known to have reached England alive.¹

Pheasant runs and Duck pens are in the course of construction, and when finished will add further charm to an already very fine collection of birds.

The following are some of Mr. Hedges previous breeding successes:

Chattering Lory, Red-billed Weaver, Orange Weaver (first time in England). Smith's Squatter Pigeon, Silverbill × Zebra Finch (first time in France).

[¹ Mr. Frost imported one of these parrots in 1919.—ED.]

FIELDFARES AND REDWINGS

By Captain HAMILTON SCOTT

As far as I am aware there appears to have been very little recorded of Fieldfares and Redwings as cage or aviary birds, so I thought the following notes might be of interest to those aviculturists who keep some of the larger insectivorous birds. Though both are pretty regular and comparatively common winter visitants to this country, yet it is very seldom one is enabled to get sufficiently close to them in their wild state—especially Fieldfares—to appreciate the beauty of their plumage. Both are handsome birds, though not so brilliantly coloured as are some of their foreign relations. Nevertheless the blending of soft browns and slaty blues of the back and head of the male Fieldfare together with the dull orange of the upper breast, heavily spotted with dark brown and the beautifully pencilled flanks make him a very attractive bird.

Redwings at a short distance are no doubt mistaken by many for Song Thrushes, being very similar in outline and general appearance ; the two obvious and distinctive features are the light cream-coloured line above the eye and the rich red-brown of the flank feathers ; these latter are hardly visible at times, for instance, immediately the bird has alighted, the wing feathers then obscuring the reddish feathers, which are those of the breast—not the wing. These coloured feathers overlap the wing when the bird has settled down.

The cold spell experienced at the commencement of December last year had the effect of drawing both species from the fields and meadows to the more sheltered places such as gardens and shrubberies around houses. Both these migratory thrushes have always interested me, and I had often thought that I should like to have a pair of each, with suitable companions, in an aviary—each pair, of course, in a separate enclosure. Previously, however, the mild winters had rather militated against catching them, and none of the local bird-catchers seemed keen on trying.

During the cold snap at the end of November I happened to be out one evening with my terriers when on passing under a thick holly bush they disturbed a bird which dashed off into the darkness. A few

minutes later I heard it fluttering against the tennis netting. Thinking in all probability it was either a Song Thrush or a Blackbird I was about to leave it when it occurred to me that perhaps it might be a Fieldfare, two or three of which had been seen in the garden the day before, so pushing through the bushes I secured the bird. On bringing it to the light it turned out to be a fine Redwing, which I placed in a large box-cage in an indoor bird-room. The cold weather continuing a flock of about a dozen Fieldfares visited the garden, some old windfall apples which had been left in the grass under the trees were the attraction. So I decided to rig up a trap—quite a simple contrivance—a piece of strawberry netting over some thin iron rods fixed on short stakes with a falling trap-door at one end, controlled by a cord leading to a “hide” in the shrubbery; the bait being the aforementioned windfalls. Within half an hour of setting it I had caught a fine hen; it was then nearly dark. Before leaving I had the end of the cord fastened to my bedroom window. Next morning there was a great commotion outside, and on carefully looking out I saw a fine cock Fieldfare doing battle with a Missel Thrush inside the trap! Pulling the cord I hurried down, secured the Fieldfare and released the Missel Thrush. Two days later another cock was caught. Then the thaw set in and the remainder departed to the fields again. I noticed whilst they were in the garden they were very intolerant of any other Thrushes, driving away Blackbirds and Song Thrushes as well as Starlings and the only Redwing which came into the garden at that time.

To begin with I kept each of them in a box-cage. They are, however, too large for such confinement and made their cages in a filthy state in a very few hours. Regardless of this I think they should be kept at least a week in a comparatively small area to get over their initial wildness. Later they were transferred to a good-sized enclosure in the loft bird-room.

I do not remember having seen it recorded that Fieldfares are exceptionally pugnacious birds. That they are, there is no doubt, and within a few hours of being put in this place I had to rescue both the hen and the second cock from the attacks of the first; both birds had taken refuge in a corner and were mercilessly set upon if they

dared come out or approach the food tray. So this meant catching them up and fixing up three separate flights. I now have the first cock and the hen in adjoining flights separated by tightly strained fish netting. It is interesting to watch them—the cock bird is continually displaying to the hen, drooping his wings and showing the pale slate-grey colour of the lower back, and raising the feathers on the shoulders, thereby intensifying the bright brown colouring there, the hen at the same time raising and spreading her tail and lowering and flirting her wings. That she is not exactly admiring his attentions is shown by her sudden dashing at him through the netting; he replies to the attack, and up they go to the top of the house and then on to the floor—like two Bantam Cocks! This happens at intervals during the day. They appear quite unable to injure each other through the net, I think owing to its movement and the narrowing of the meshes as they hang on them.

I always knew it was a dangerous practice to keep cocks and hens of most of the *Turdidæ* in the same aviary, especially as the breeding season draws near, but I do not think any of the Thrushes can surpass Fieldfares for vindictiveness to their own kind.

At present I have not had the experience of keeping Redwings together. So far I have not been able to secure any more, though with the return of the hard weather there are quite a number in the Valley close by, but they are more difficult to attract, not caring for the apples as the Fieldfares do. The one I have I still keep in a large cage and it has become quite tame, though it will not yet take mealworms from the hand, but it hops down immediately to get them.

As I look after all my birds myself, to save time in the morning, I prepare the food for the Fieldfares and Redwing overnight and change the water of the latter. The curious thing is it invariably comes down by artificial light and bathes directly the fresh water is put in—not just a splash from the edge of the pan, but a real soaking, jumping into the middle of the dish and splashing vigorously.

Regarding freshly caught Thrushes, they should never be confined to begin with in cages with fronts of metal bars or fine wire-netting, for they are certain to damage themselves severely against this. In a few hours this Redwing had cut its forehead by being put into a cage.

with a fine wire-netting front, the only one available at the time ; it was changed at once into a quickly improvised one with a string-net front and it now shows no sign of the injury. For the same reason the wire-netting of the flights should be protected by this string netting strained about 3 inches inside. This prevents the birds injuring themselves as they are rather liable when suddenly alarmed, in their early days, to go full tilt at the wire ; the string netting just breaks the shock and bounces them back and they soon give up the idea of flying against it.

Neither Fieldfares nor Redwings appear at all difficult to “ meat off ” ; the former were given apple together with some crushed dog biscuit moistened to a crumbly paste with boiling water to which were added a few soaked grocer’s currants, and some insectile mixture. A few mealworms were also given and earthworms when available.

For the first day or so they only ate the apple, then the currants were picked out and now (eight weeks after capture) they eat the biscuit greedily and practically ignore the apple, though they still have it. The currants are the favourite food of them all.

No full description of the song of the Fieldfare seems to be given in any of the bird-books at my disposal, so it should be rather interesting to hear what it is like if I am successful in keeping them in good health through the spring and summer. I propose keeping the two cock-birds just out of sight of each other.

Seeböhm describes the song of the Fieldfare as “ a wild desultory warble ”. Bewick, writing of the Redwing, says “ like the Fieldfare they leave us in the spring for which reason their song is quite unknown to us, but is said to be very pleasing ”.¹ Bewick further mentions the interesting fact that “ the Romans kept them and fed them with a sort of paste made from bruised figs and flour and various other kinds of food to improve the delicacy and flavour of their flesh ”.

With Fieldfares, of course, it is quite easy to distinguish the sexes—the male bird showing much more slaty-blue both on the head and

[¹ A writer in *British Birds* of March, 1926, describes the song of the Redwing as heard at Reading in January: “ The phrases of the song were so varied and the pauses so few and short as to be reminiscent of a well-trained Hartz Canary.”—ED.]

neck and lower back than the hen and the upper breast is of a deeper colour—I think pale dull orange would describe the shade—and it is more heavily spotted. The cocks I have vary a good deal in colour; one has a much deeper coloured breast, and in the other the bluey shade on the head is more intense. Another distinguishing feature is the partially yellow and black mandibles of the cock birds. With the Redwing the differences are practically non-existent. I wonder if any member knows of any definite plumage distinction?

AVICULTURAL NOTES

Some people, who probably consider themselves to be sportsmen, cannot resist the temptation to kill every unusual bird that makes its appearance in the country-side, a fact which accounts for the scarcity of several species, such as the Hoopoe and Golden Oriole, that might become established if only they were left alone. The following cutting from *The Gamekeeper*, which has been sent us by Mr. G. Beever, refers to an unfortunate Ring-necked Parrakeet which had escaped from captivity and which might at least have been left in peace:—

“When out rabbiting extraordinary ‘bags’ are sometimes obtained and a local party had a somewhat unusual experience last week. One of their number espied a bird flying towards him, the flight of which he could not identify, so he attracted his companion’s attention. ‘It’s a snipe,’ said one. ‘No it isn’t,’ retorted another, ‘it’s a hawk. Look at its flight.’ ‘Well, here goes,’ said the third as he raised his gun and fired. ‘Bang, bang.’ The noise apparently attracted the bird for it flew into a neighbouring tree and gazed inquiringly at the sportsmen. ‘Bang, bang, bang,’ went the guns, and finally a forlorn bundle of feathers dropped to the ground with a sickening thud. Even then the sportsmen’s curiosity was not satisfied for they were still unable to identify their victim. In due course the body was sent to me and on examination proved to be a female ring-necked Parroquet from far-away India. Evidently escaped from captivity, the bird had apparently had a good time, for it was in excellent condition in spite of the previous hard weather with which we have been favoured in this locality.”

We should like to congratulate our member, Mr. Satya Charan Law, of Calcutta, upon whom the degree of Ph.D. has been conferred by the University of Calcutta on account of his work in Zoology and Aviculture.

In the account of the Foreign Birds at the recent Crystal Palace show, a Conure, exhibited by Mr. Whitley was referred to as "a bird which neither the judge nor anyone else could identify", and further that "more would be heard about it in the near future". This particular bird had baffled everybody who had seen it for some time past, and finally Mr. Whitley was persuaded to send it to the Natural History Museum for identification. There it was examined by at least three of the most competent ornithologists in the country, who decided that it belonged to an undescribed species, and was unnamed. We understand that Mr. N. B. Kinnear, of the Natural History Museum, has now named it after its owner, Mr. Herbert Whitley, and it is proposed to publish a coloured plate of it in the *AVICULTURAL MAGAZINE* before long.

Mr. Alfred Ezra's collection has been augmented by the following rarities, all of which were recently imported by Mr. Walter Goodfellow : One Count Raggi's, one Magnificent, two Princess Stephanie's, two Lawe's Six-plumed and two Superb Birds of Paradise ; two Manucodes, one Blue-tailed Pitta, two Fairy Blue-birds, two Yellow-fronted Ground Doves, two Grey-breasted Ground Doves, one Green-winged King Parrakeet, two Black-headed Cat-birds, one Stella Lory, one Timor Lory, two Mitchell's Lorikeets, two Green-naped Lorikeets, one Black-capped Lory, three Superb, three Black-capped, four Lilac-crowned, one Jambu, one Gestro, and three Magnificent Fruit Pigeons.

The awarding of medals for the breeding of species for the first time had got rather behind-hand of late, but arrangements have been made to issue them more promptly in future, where there is no doubt that the species has not been previously bred in the United Kingdom. But we should like to mention here that now that ornithologists are paying so much attention to the naming of geographical races of birds, and calling them sub-species under separate names, it might happen that some member would succeed in breeding a bird which was merely

a sub-species or local race of a species that had been previously bred, and in such a case it is unlikely that the Council would award a medal.

In the *Condor* of January–February, 1926, Dr. Casey A. Wood writes a long and interesting article entitled “Lessons in Aviculture from English Aviaries”, in which he describes a motor-tour which he undertook in 1924, accompanied by Mrs. Casey Wood and our Honorary Secretary, to some of the principal private aviaries in the south and middle counties of England. The author compares our inhospitable climate with the beautiful climate of California, where he hopes to encourage a liking for aviculture. He was very impressed with what he saw of aviculture here, and suggests to his compatriots of the Pacific Coast that they should take advantage of the age-long experience of their Transatlantic cousins.

REVIEWS

THE PROBLEMS OF BIRD PROTECTION¹

Birds in England is the title of a very carefully thought-out treatise on the subject of the protection of bird life in this country, and of all of the problems which this involves. Changes are constantly taking place in the bird population, and where one species declines another increases, and the probability is that, at the present time there are quite as many, if not more, birds in England now than at any period. But, although there may be more individuals, a good many of these are of the less desirable kinds, and some of the finest species have gone.

There are several contributory causes to the changes that have occurred. The drainage of marsh-lands has removed the breeding sites of some of our Waders; the extravagant extent to which game-preservation was carried out in the Victorian era accounted for the ruthless massacre of such fine species as the Peregrine, Buzzard, Eagles, and Owls, while the protection of the coverts has undoubtedly been beneficial to many other species. The collector of skins and eggs is probably responsible for the final extermination of several species that

¹ *Birds in England: an account of the state of our Bird-life and a criticism of Bird Protection.* By E. M. Nicholson. London, Chapman & Hall, Ltd. Price 12s. 6d. net.

were so rare as to make their dead skins and egg-shells of value. In fact the author has no use for the collector, who he regards as the root of most of the evil that has been wrought.

The ruthless destruction of the birds of prey, Nature's Police, whose duty it is to keep the smaller fry within bounds, has led to the abnormal increase of certain species such as the Starling and the Sparrow, and thus upset the balance of Nature to the detriment of mankind.

These and other problems are thoroughly and ably discussed in the volume before us, while chapters are devoted to the work of such naturalists as Gilbert White, Montagu, Bewick, Jardine, and finally Hudson.

We heartily commend this book to all who have the welfare of our native birds at heart.

BIRDS OF THE RIVIERA¹

The Riviera is such a favourite resort of English people during the winter and early spring months that a book dealing with all of the birds that occur there was much needed, and we congratulate our member, Mr. Collingwood Ingram, on having produced a work that cannot but be of extreme value to all who are interested in the ornithology of that favoured district. The author's father, the late Sir William Ingram, a keen lover of birds and for many years a member of the Avicultural Society, owned a villa near Monte Carlo, and there his son spent much of his early life and, inheriting a love for birds, kept careful notes on the various species he met with, notes which have now been amplified by all the available records existing, and developed to form a book containing a complete list of all of the birds that are known to have occurred in the Côte d'Azur, from the Esterel Mountains to the Italian frontier.

The spring is by far the most interesting time to study birds in the Riviera, for the waves of migrants, after crossing the Mediterranean by night, break upon the shore and in the morning may be noticed in

¹ *Birds of the Riviera*, being an account of the Avifauna of the Côte d'Azur from the Esterel Mountains to the Italian Frontier. By Collingwood Ingram, M.B.O.U. London, H. F. and G. Witherby, 326 High Holborn. Price 12s. 6d. net.

all the undergrowth along the coast before continuing their journey northwards. After a night of inclement weather every bush may teem with Nightingales, all of which disperse in a day or two.

Unfortunately almost every bird is considered to be edible, and only appreciated for this quality, so that when a large party of Bee-eaters attempted to set up a breeding colony in a steep bank under the village of Biot, the young were all killed for eating purposes as soon as they were large enough, and after a second attempt and like reception they failed to return again.

The Quail might still be common in England every summer were it not for the hostile reception afforded it on first landing in Europe.

All who contemplate a visit to the Riviera should take with them a copy of Mr. Ingram's book.

D. S-S.

CORRESPONDENCE

NYASA LOVEBIRDS

SIR,—No doubt many members have now become possessed of some of the recently imported Nyasa Lovebirds, and I think an exchange of views or reports on observation will be of interest to others.

I purchased four of these birds about three weeks ago, and after hours of observation I cannot yet sex them, and have concluded that, until placed into suitable breeding quarters they never will be definitely sexed.

They are extremely active in climbing, and very swift in flight, and utter a quite pleasing note. They are very fond of millet-spray, and my own four specimens clear quite four sprays per day, besides a staple diet of equal parts of Canary and white millet.

I have tried them with every conceivable kind of fruit, which so far they just ignore.

I have found them very destructive to woodwork, and can be amused with suitable twigs with the bark left on, which they apparently enjoy stripping.

As the habitat of the species is confined to the neighbourhood of the Shire River, a malarious district in Nyasaland, it is highly probable

that there may not be another importation for many years, so that as many members as can procure these birds should do so and establish them in suitable breeding quarters, and personally I think they will breed readily.

An excellent opportunity arises to win our Society's medal, and a special certificate in addition, for the breeding of this species for the first time in Europe.

W. R. H. BEARBY.

LONGEVITY OF THE RUFOUS TINNAMON

SIR,—I think it is worth while placing on record that a Rufous Tinnamon, which I obtained on 30th May, 1910, died on 22nd February, 1926 ; thus it has lived here for sixteen years, and I do not know what age it was when I received it. Except for being almost blind, and somewhat bald, it was in good condition.

G. H. GURNEY.

AN APPRECIATION

SIR,—At the recent meeting of the Council a vote of thanks to the Hon. Secretary and Treasurer was carried unanimously.

I think that Miss Knobel's work is appreciated by all on the Council, but I doubt whether the members in general realize how much the Society is indebted to her.

The duties of Secretary and Treasurer provide almost daily work throughout the year, and the amount of correspondence is continually increasing, and I understand that during the past year Miss Knobel wrote over nine hundred letters in this connexion.

Continual care and judgment is required in dealing with the money matters. We have lately passed through a difficult time, and it is owing to our Secretary's skill and hard work that our Society is in its present comparatively flourishing condition. May I urge members to pay their subscriptions punctually, and thus save letters of personal application ?

The Magazine cannot be produced at its present high standard on our annual income with the present membership, and any donations will be gratefully received.

Above all it is desirable to increase our membership, and all should do their best to obtain new members. With a membership of 600 the Magazine could be produced so as to pay its way. Until that number is reached we must depend to some extent on donations, and constant care and management will be required to make both ends meet.

B. C. THOMASSET.

The Society's Medal

It is proposed to award the Medal to the following members for their successes in breeding species of birds which it is believed have not previously been bred in the United Kingdom. But if any member or reader should know of a previous instance, it is specially requested that the Honorary Secretary may be informed without delay :—

Mr. W. Shore-Baily, for breeding *Turdus olivaceus*. 1924, p. 255.

Mr. W. Shore-Baily, for breeding *Penthetriopsis macrura*. 1924, p. 256.

Mr. W. Shore-Baily, for breeding *Crypturus cinereus*. 1925, p. 18.

Mr. W. Shore-Baily, for breeding *Pyrrhura vittata*. 1925, p. 131.

Mr. W. Shore-Baily, for breeding *Conurus rubrolarvatus*. 1925, p. 318.

Mr. Alfred Ezra, for breeding *Geotrygon coniceps*. 1925, p. 298.

Mr. Albert Sherriff, for breeding *Lioptila capistrata*. 1925, p. 185.

Mr. W. Suggett, for breeding *Myzantha garrula*. 1925, p. 265.

Mr. W. Lewis, for breeding *Brotogerys pyrrhopterus*. 1926, p. 71.

Mr. W. Lewis, for breeding *Agapornis taranta*. 1926, p. 71.

Mr. Albert Sutcliffe, for breeding *Xanthura beecheei*, 1926, p. 102.

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MAY, 1926.

AN EXPERIMENT IN AVIARIES

By the MARQUESS OF TAVISTOCK

About three years ago, disgusted by the losses and poor breeding results experienced when keeping a large and valuable collection of Parrakeets in ranges of aviaries of the usual type, I decided on an entirely new venture and constructed movable aviaries which, by the use of wooden rollers, could be shifted on to fresh ground each year. The site available was a meadow, fairly well sheltered, except from the east, but possessing the drawback of being exceedingly wet in rainy weather, owing to the absence of any fall in the ground to encourage drainage. Each aviary is about 24 ft. long, 8 ft. high, and 8 ft. wide, and normally contains one breeding pair of birds only. The entire aviary, including the floor, is covered with $\frac{1}{2}$ in. mesh wire netting, with an inner lining of very thick inch mesh netting for the few birds I have that can bite the thinner wire—Alexandrine, Pileated and Barnard's Parrakeets being the chief offenders in this respect. The $\frac{1}{2}$ in. mesh defeats rats, which are very numerous all round, but it does not entirely exclude mice, especially young ones. Grass quickly grows through the meshes of the floor netting, and in a very short time it is completely covered. Practically all ledges and framework are on the outside of the wire, so that no droppings can collect on them and the birds cannot destroy the wood. The bottom frame is made extra stout and strong so as not to crack easily when the aviary is being

lifted on to the rollers for the annual move. Moving is done in autumn and the old site is afterwards heavily salted and limed. Having observed by experiment with birds at liberty, that even such tropical species as the Hooded Parrakeet (*Psephotus dissimilis*) can pass the winter out of doors if sheltered from wind and wet, I originally had only hanging shelters made, which were entirely open at the bottom, but were so arranged that the birds could find protection no matter what the direction of the wind happened to be. This plan was not an entire success. It seemed to suit Kings, Crimson-wings, Ringnecks and their allies, when not breeding, but in a bad summer when the nights were cold the mortality among the unfledged young was great, and it did not suit the Broadtailed Parrakeets at all, mainly, I think, because they would not take advantage of the shelters but insisted on sitting and roosting on the open perches till they were ill with cold and exposure. In stormy weather during the warmer months of the year there were also occasional losses from pneumonia, apparently of the aspergillary kind. I therefore did away with most of the hanging shelters and constructed a shelter shed about three feet wide at the end of each aviary, boarding the end up completely and lighting it by small windows, protected by wire netting. The floor of the shelter is formed by three sliding zinc trays filled with sand, and the perches are so arranged that all droppings fall in the middle of the trays and not on the edges, or on the frames on which the trays run. Once a month the sand is collected in a bucket; the trays are taken out and scrubbed; the entire interior of the shelter is sprayed with "Budge" and water, and the earth beneath the trays is liberally sprinkled with salt to discourage the growth of fungi, moulds and bacilli. In the back of the shelter there is a door, but human access to the flight is gained only by a door in the far end of the flight itself, two doors in the shelter being productive of draughts. Every effort is made to render the shelter bone-dry in all weathers, and cracks in the wood are stopped up from outside with putty. There is a felt roof over the wood and over that corrugated iron. In one side of the shelter there is a little door about 18 in. square on the inside of which food dishes are hung on a wire bracket. The birds gain access to the flight through a hole in the front of the shelter, near the top, on a level with the

perches and near the food-bracket end. There is a window in the back of the shelter exactly opposite the hole, so that the birds, seeing the light in front of them, enter more readily from the flight. The hole itself is closed by a slide, and the birds are driven in at night and shut up throughout the year. When first introduced into the aviary the birds are shut up in the shelter for a few days in order that they may grow thoroughly accustomed to it and learn where the food is. Should they prove very obstinate about re-entering the shelter after their first day in the flight a "wing" of string netting on a wooden frame is hung up to guide them to the opening and prevent them from continually breaking past the person who is trying to drive them in. Most birds quickly learn what is expected of them, and even young ones usually go in without trouble after a couple of days. Bourke's Parrakeets are by far the most foolish and intractable, and it requires a good deal of patience at first to train them. In the case of Many-colours the top of the shelter must have an inner lining of canvas a few inches below the real roof, for, if suddenly startled in the night, they are prone to dash violently upwards and fracture their skulls. Grass Parrakeets of the genus *Neophema*, in addition to the canvas roof, need to have all the windows of the shelter protected by taut string netting, a few inches from the wire and the roof and end of the flight must be similarly treated. To prevent them from biting holes in the string netting and getting between the string and the wire, smooth boards about 8 in. wide must be fastened right along each side of the flight immediately below the string netting. Grass Parrakeets are poor climbers, and the boards give them no foothold from which to bite the string netting above them. Bourke's must have the whole of their shelter and the whole of their flight lined, and the string netting must be carefully watched and tightened when it stretches slack. They have a perfectly fiendish ingenuity in discovering a slack or unprotected spot against which to crack their fragile skulls. They do not, however, bite holes in the netting. In the back of the shelter, not far from the feeding door, is a kind of box, zinc-lined, with a space of a few inches between the zinc and the outer wood. There is a door in the side of the box which can be reached by a person standing outside at the back of the shelter. The front of the box is open to the interior of the shelter from which it

is separated by wire netting only. This box is large enough to contain, if necessary, three good-sized brooder lamps for heating purposes, the zinc lining and air space between it and the outer wood preventing the danger of fire. One lamp prevents the temperature falling below freezing point except in the severest weather. Two maintain a nice warmth and three make the shelter really cosy, even when it is very cold. The possibility of heating the shelter in three different degrees is a very great advantage when dealing with the more valuable and delicate birds. New arrivals that have not yet moulted in England are often much safer if provided with a bit of artificial heat during their first summer. Fairly hardy birds that arrive in late autumn or winter can, with judicious management, be got into their breeding quarters months before it would be possible if the shelters were unheated, and in this way one can often avoid wasting a year before they are ready to nest. A moulting adult, or a youngster not many weeks out of the nest, is sometimes, when kept in an unheated aviary, upset by the first chilly weather of autumn. To return such a bird to a cold aviary after its recovery is to court disaster, and the alternative of keeping it caged in a warm room until the following spring has little to recommend it; if the invalid be one of a breeding pair, the lack of exercise seriously affects its value for stock purposes, while if it be young, the same adverse factor inflicts an almost irreparable check on its growth at the most critical period of its life. On the other hand, if the bird be returned to a moveable aviary with a heated shelter, it frequently passes through the winter without further trouble and spring finds it in perfect health and vigour. Little need be said about the aviary flight. At the end nearest the shelter the roof overhangs about a couple of feet and there is a little protection at the sides so that the birds can use a dry and fairly sheltered perch without having to enter the shelter itself. There is also some wind and rain protection at the opposite end of the aviary near the top, while over the centre of the flight there is a circular piece of boarding a few feet square to provide extra shade. In the end of the flight, opposite the shelter, a small door about 18 in. square gives access to a bracket on which hang the bath and fruit vessels. No seed is kept in the outer part of the aviary, but a handful of oats is thrown in every

week to sprout among the grass. For catching purposes I have a box of wire netting on a wooden frame with an inner lining of taut string netting to prevent birds hurting themselves against the wire. This box can be hung on to the top corner of the end of the aviary flight by means of two hooks. A small inward and upward opening door in the same top corner of the aviary flight is then pulled up by a piece of string some yards in length, which is passed through a mesh of the roof wire, one end being fastened to the lip of the door, and the other being held in the hand of the person doing the catching. A slide closing the catching-box and separating it from the aviary is then moved back and everything is ready. The person holding the string, the other end of which is fastened to the raised catching-door, takes his stand in the centre of the flight, while his assistant gently drives the bird into the corner, where it either runs along the perch and walks into the catching-box, or flies straight in. Before it has time to discover its mistake the person slacks the string which was holding the little hinged door against the roof of the aviary, the door drops down of its own weight and the bird is caught without netting or handling. All that remains is to push forward and fasten the slide of the catching-box and readjust the little top door of the flight. It is important never to forget to close the catching-box slide, a mistake that is easily made if one is hurried or absent-minded. If you do forget, directly the catching-box is unhooded, the bird sails out to liberty and your catching has to be done over again under far more difficult circumstances! I never, if I can possibly avoid it, catch a bird by shutting it into the shelter and then netting it. It makes them very nervous of the shelter, where it is important that they should feel perfectly secure. A wary and obstinate bird that will not enter the catching-box can be compelled to do so by hanging up a "wing" like that recommended for birds which refuse to re-enter the shelter.

Nest-boxes are fixed up inside the shelter near the end furthest from the feeding-door, lamp box and hole giving entrance into the flight. A sitting bird is less likely to be disturbed if her box is as far as possible from the feeding-door, while by having the feeding-door and entrance hole on the same side, though of course at right angles

to one another, you do not, every time you feed, drive out into the flight a shy bird that is sheltering from the cold.

So much for the aviaries themselves; what has been the effect on the health of the inmates? Infectious diseases, like tuberculosis and septicæmia, have vanished altogether. The only disease of a possibly infectious character has been pneumonia, which seems to be the aspergillary kind. A mould or fungus which usually grows on musty grain and other vegetable matter is said, under certain conditions, to develop a malignant character and attack the tissues of living birds. It is a warm-weather ailment which occurs from May to October when it is muggy and violent rain-storms alternate with sunny intervals. I am hoping to defeat it by having the shelters and food perfectly dry and by disinfecting with Budge and salt at regular intervals.

What I may call obscure and miscellaneous ailments, such as sudden death from heart or kidney trouble, have been few and for the most part confined to two or three species. They may have been due to wrong feeding, as there have been no cases since I put the birds most liable on a seed mixture containing no hemp, sunflower nor peanuts.

Chills have been the main and only serious cause of loss, which perhaps is not surprising seeing that quite three-quarters of my present collection is composed of the less hardy and less easily kept species. Here again I am hoping that the new type of shelter and the driving in of all birds at night throughout the year will greatly improve the situation. It took me some time to learn that the most unhealthy months of the year, when chills are most frequent and heating of the shelters is most necessary, are not the coldest and wettest months, but the late summer and autumn. In January and February, when there is ice and snow and constant slush and the flights are partly under water for weeks at a time, the death and sickness rate sinks to zero. They begin to rise at the end of June, to decline again in late November. Of course the moult has something to do with it, but it is by no means always the moulting birds that fall sick in the latter half of the year, and I can only conclude that the higher temperature fosters the rapid growth of those germs which take advantage of a bird's slightly lowered vitality due to a change in temperature. In winter

the bird's vitality is tried, perhaps to an even greater extent, by the weather, but the microbes, being even more adversely affected by the cold than the birds, no great harm ensues.

Perhaps the most encouraging result of the new aviaries has been the effect on the fertility of the birds and the stamina of the young reared. Under the old régime some pairs would not nest at all, the percentage of clear eggs was very high, and the great majority of young birds that left the nest were degenerate and weakly, sometimes to the eye, and always when themselves tested for breeding. I am inclined to think that this is the almost universal experience of those who breed the larger or more delicate Parrakeets in fixed aviaries. The first generation are not equal to the parents; the second generation is markedly inferior; in the third generation (if you get one) you are done and have to buy imported stock. In the movable aviaries practically every hen goes to nest that might reasonably be expected to do so. The fertility of the cocks is high. I do still get infertile eggs, but the cause is nearly always a non-physical one, the cock taking a dislike to his partner, or falling in love with a neighbour.

Ring-necked Parrakeets used to have some deformed young in every nest. Now the young are always perfect. They show signs of coming into breeding condition when 10 months old and nest when 2 years old, although the cocks are still in immature plumage. It is rather curious that a fine adult pair which bred last year in the Black Cockatoo's large aviaries, which are now the only fixed ones, were the only pair of birds in the collection to produce defective young. These aviaries have only been up three years.

Hen Barrabands in the movable aviaries come into breeding condition when 10 months old and hen Rock Peplars the same. In ordinary aviaries they always take two years to mature and cocks reared under such conditions are nearly always sterile. Cock Barrabands bred in the movable aviaries were finer and more vigorous at two years old than their imported parents, but a cock bred in a fixed aviary was never any good for breeding, even after years of complete liberty. He was lively enough and paired, but I never got a fertile egg with him.

According to the old writers, aviary-bred cock Crimson-wings

are three years before they breed ; a Crimson-wing Princess of Wales hybrid, hatched last summer began to display when 5 months old and is now (February) so anxious to mate that he will come up to the end of the aviary and display to me, although he has never been patted or tamed.

Blue-winged Grass Parrakeets, bred in fixed aviaries, often showed a tendency to grow defective flight feathers. The cocks were always sterile and the hens laid soft-shelled eggs or died egg-bound. One of these cocks bred after a year in a movable aviary. The young showed extraordinary hardiness and vigour. They actually began to display and feed one another when little more than three months old and continued to do so in the very middle of the winter when they were in full moult and their tail feathers half in quills. They ran about most happily among ice and snow ; and they had only one brooder lamp to warm the aviary shelter, which did not prevent the water from freezing on the coldest nights. Yet, in a general way, *Neophema venusta* is a decidedly delicate bird, and imported specimens in the finest condition often need artificial heat, even in summer, if they are to escape fatal chills. Why there should be such an enormous difference in the breeding stamina and freedom from infectious disease when birds are kept in movable aviaries, I find it difficult to say. My old aviaries were extremely clean, the soil was disinfected, the turf changed, fresh green food was provided daily and only one pair of birds occupied each compartment ; yet the breeding results were wretched and the rate or mortality was far too high, although as long as they lived the birds were usually in perfect plumage and excited the admiration of visitors. In the light of the last three years' experience never again will I go back to the fixed aviary with soil or sanded floor, and I should strongly advise all who keep Parrakeets—and perhaps certain other families of birds also—to follow my example if they *possibly* can. I am quite sure that they would get better results in a small movable aviary than in a fixed one twice or three times the size. Of course it is rather easier to make fixed aviaries nice-looking than movable ones, but he is indeed a poor aviculturist who puts handsome architecture before the health and longevity of his birds.

If I found myself compelled, from lack of space, to build fixed

aviaries, I should construct them rather on the principle of an up-to-date dog kennel, with a tiled floor that could be washed down at frequent intervals and thoroughly disinfected. Green food would be brought in daily and kept fresh in jars of clean water. On the floor would be a very large zinc tray containing fresh turf and sprouting oats, the turf being renewed as often as possible. Goat-keepers find that their animals do well when moved daily on to fresh pasture and also when their green forage is cut and brought to them in a stable, but if the goats are tethered constantly on the same ground they are apt to sicken and die. I have a strong suspicion that the same principle works in the case of birds. Either they must have a frequent change of soil and "pasture", or earth, sand, and herbage must only be presented to them in a way which ensures it being absolutely uncontaminated by droppings.

AN AGED GREAT BUSTARD

By W. H. ST. QUINTIN

I have elsewhere recorded that a female Great Bustard, which, with others, I received from Spain, as a nestling, in 1897, died last January after being in my collection 28½ years. As this bird, with others of her kind, have lived for many years with me, it may be useful if I state what treatment has appeared to suit them, in the rather bleak climate of East Yorkshire.

To begin with, the staple food they have always had has been sound barley-meal three-quarters, with good Crissel, or poultry-meal of good quality one quarter, scalded with hot water, and mixed into a crumbly (not sticky) mass. This, with a little boiled potato, a few bits of stale bread, and some cabbage leaves, is what the birds practically lived upon. As to the cabbage, it is well to wire the head to a post or fence, so that the birds can peck at it without soiling it on the ground.

My Bustards have never cared for uncooked meat, nor have I ever had one that would more than occasionally take a freshly killed mouse or Sparrow.

The old bird, which I have just lost, though to the last very shy with strangers, would come gently up to me, if alone, and take from my

hand small bits of cooked meat, potato, brussel sprouts, and, before anything else, "Yorkshire Pudding," which, by the way, all Cranes that I have kept have been especially fond of !

My Bustards have never seemed to mind dry, frosty weather, so long as they have been quite protected from wind, and still more from wind with rain. They have always had dry sheds with plenty of peat-moss litter on the floors, facing south, the front partly boarded up, but so as not to exclude the winter sun, the upper part wired up with small-meshed netting to keep out small birds, which in winter will leave little in the food-pans. Unfortunately Bustards, like some other birds, Cranes, for instance, can not be trusted to take advantage of shelter provided for them, and have to be driven in if the weather threatens ; or, better still, they should be kept in if the weather is doubtful in the morning. In summer and early autumn my birds remained out all night, for they can stand a certain amount of summer rain with impunity if there are bushes in their enclosure, against which they will stand to protect themselves against wind.

But though they no doubt benefit by opportunities for exercise, it is rather disappointing to find how little natural food they seem to find, even in a large enclosure with grass left long. In fact it has been, in my case, quite exceptional to see the Bustards "foraging". They are fond of dusting, and should have access to some hollow in the ground, filled up with sand and ashes. My birds have been fed twice a day, with additional tit-bits supplied by myself as an "extra".

It only remains to mention the extreme nervousness of Great Bustards in confinement, their liability to be seized with paroxysms of terror at the sight of some unfamiliar object such as a woman's dress, a child, or dog. Also the remarkable brittleness of the large bones of a Bustard, which greatly contributes to the seriousness of any accident. My first Great Bustard came to me in an unlined basket with both legs and one wing hopelessly shattered. In addition, I have known three adult Bustards, kept in private grounds, each destroyed by dashing itself against the fences, startled by the unexpected visit of a stranger (to the bird), two of these birds being my own.

PARROTS AND PARRAKEETS IN GENERAL

By the MARQUESS OF TAVISTOCK

These birds are so popular that it is not necessary to give a lengthy description of them. Everybody knows their hooked beaks, their feet with two fingers rather than toes, their dazzling plumage and their power of imitating human speech.

Parrots and Parrakeets constitute the order of Psittaciformes ; the larger species are usually called Parrots and the smaller Parrakeets, but these designations do not follow any scientific classification.

In confinement these birds are kept according to their kind, either chained to a perch or in metal cages or in aviaries. It must never be forgotten when housing them how powerful an implement for destruction they possess in their beaks.

The Parrot family is so large and so various that it is difficult to give a general description which will apply to all the groups, so that we must describe the care and the food required by each of the families into which we shall divide them.

For all that, we may here insert some account of their management and their diseases.

At least three-quarters of the diseases from which Parrots suffer in Europe have their origin in chills, and if the bird is not too seriously attacked it may be saved by being placed in a confined space in a temperature of 85° to 90°. Great heat will do more to cure it than any medicine, and every one who has a number of birds should set aside as a hospital a room heated preferably by gas or electricity. Where this means of heating cannot be employed a stove may be used, but those which burn either coke or anthracite are open to the objection of requiring to be stoked day and night every two or three hours if an even temperature is to be maintained. People who have only a few birds might save the life of a sick one by placing it in an incubator modified according to the needs of a bird which can fly and which requires light to feed by.

It is a wise precaution always to keep new arrivals in quarantine for a week or two at least, for Parrots and Parrakeets are subject to divers contagious and incurable diseases, which they may contract

either in the bird-dealer's shop or on board ship. To neglect this precaution is to expose oneself sooner or later to disastrous consequences.

Egg-binding is not uncommon, at least among certain species, and breeding hens should be kept under observation as far as possible without disturbing them. It may be caused either by the hen being kept in too low a temperature or by lack of vigour. A Finch will sometimes lay her first egg safely after having looked puffy and wretched for some hours; and the hens of some foreign Sparrows may be egg-bound with their first and afterwards complete their clutch without further trouble; but among Parrots the case is different; if a hen is ill with her first egg she will never lay again without treatment. The treatment consists in placing her in a very hot place just as though she were suffering from a very severe chill. When a Parrot has had trouble with her first egg, she will have it with all the others if her owner is rash enough to replace her in the aviary and to allow her to nest as soon as she has laid her first egg. But the truth is, as a general rule, that a hen which has suffered from egg-binding is useless to try and breed from, for she will have the same trouble with each egg that she tries to lay.

It will possibly be useful to warn intending breeders of Parrots that a male which has any serious defect in his feet is of no use to breed from and no eggs will be fertilized by him. A defective wing is not so important. Parrots and Parrakeets differ in this way from the Passeres.

A sick Parrot may be detected by the usual signs; ruffled plumage, half-closed eyes, head tucked under the scapulars. The following is an excellent way of discovering whether a bird is sick or only asleep: if both its feet are on the perch and its head hidden away, it is certainly ill, but if one foot is tucked up there is nothing much the matter.

The only really effective way of disinfecting a cage or an aviary is to expose it entirely to the flame of a plumber's lamp. The best disinfectant for the ground is a strong dose of sea salt; lime is useless.

Aviaries may be of two kinds, movable or fixed. I personally make use of fairly large rectangular wooden aviaries for the majority of my Parrots, 24 by 8 feet high by 8 feet wide, completely covered,

even the bottom, with wire netting $\frac{1}{2}$ in. mesh and provided with wooden shelters. These aviaries can be moved bodily and by means of rollers transported annually to a fresh piece of ground. They are safe from small marauding animals and the grass which grows through the netting supplies abundant fresh green food. Every year when the aviary is moved the ground on which it stood is disinfected so that when it is used again it is perfectly wholesome.

Fixed aviaries should be built in such a way that they can be kept scrupulously clean. The floor should be cemented as for a kennel. The usual custom of having the floors of earth and grass-covered is bad. All that can be done in renewing the grass and sand if keeping the same species of Parrots there, though they may breed, they will certainly fall ill and die. Naturally this will happen sooner to the rarer more delicate kinds than to the commoner and more robust.

Paint and varnish should not be used in a Parrot aviary, but carbonide, once it is really dry, is safe.

Aviary keepers need never be afraid of allowing a Parrot to bathe whatever the temperature may be. Even when newly imported they never contract illness through bathing.

THE KEAS

By J. DELACOUR

New Zealand possesses some curious and large Parrots having long dark-coloured beaks which recall those of birds of prey.

The first, the Kaka Parrot (*Nestor meridionalis*) lives in the two islands, frequenting the forests; it is omnivorous and particularly fond of seeds, fruit, and larvæ, which last it finds under the bark of trees. Its plumage is olive brown above, each feather having a darker tip; its lower parts, neck, rump, and the lower part of the back are deeply tinged with red on a greyish olive ground; the cheeks are tinged with orange yellow, the head with dirty white, and red under the wings. The female only differs in having a weaker beak.

Although rare in captivity the Kaka lives well either in a cage or aviary; it should be fed on seeds and fruit, potato, carrot, biscuit, and a little cooked meat.

The Kea Parrot (*N. notabilis*) is larger than the preceding, and its beak is longer and slighter. It is dull olive brown, each feather bordered with black ; the wings above and the rump are red tinted, underneath orange red. The hen bird is slightly duller.

This species lives in the mountains of the Southern Island ; it is omnivorous, but since the country has been inhabited, it has developed a pronounced and criminal taste for mutton fat ; and these Parrots pierce the loins of sheep in order to devour the fat enclosing the kidneys.

In captivity the Kea requires the same treatment as the Kaka. It has occasionally been imported, but not nearly as often as it might be, since it is a most engaging species when kept in an aviary. A pair will play together for hours and show great interest in their surroundings.

In New Zealand, on account of its propensity for killing sheep, it is regarded as an outlaw and a price is put upon its head, which results in large numbers being killed. In fact the Government of New Zealand seem to be doing their best to exterminate this Parrot, one of the most interesting of the Parrot tribe.

LORIES

By J. DELACOUR

Lories constitute one of the most beautiful families of Parrots : they are natives of Oceania and are remarkable for their vivid colouring, their amusing ways, and their tameness. Some of them have short square tails, some have them pointed and as long as their wings. They have small delicate beaks and their tongues end in a brush.

Lories feed on nectar and pollen, on fruits and buds ; some kinds live almost entirely on the honey in eucalyptus flowers.

They are usually delicate in captivity as regards warmth and food. The Lorikeets of Australia are the only really hardy species. The other Lories, however, can be maintained alive for many years if they are kept in an even temperature and well fed.

For their staple food they should have bread and milk made with sugar or honey, which should be renewed twice daily and made by pouring hot milk on bread put to soak the day before ; the mixture

should be fairly liquid. My Swainson's and Red-collared Lorikeets are satisfied with bread and milk and live for years without ever being ill and without apoplectic fits, which are common among Lories.

For other kinds some fruit should be given along with bread and milk, or Mellins food. Oranges should not be given. It is a wise precaution to thin the milk with barley water.

Many people give their Lorikeets canary-seed, which I consider unnecessary, and other seeds are harmful. Lories which can be kept in outdoor aviaries, particularly *Trichoglossus*, must not be exposed to full sunlight. Lories will breed in confinement either in or out of doors; they should always have either boxes or logs, to spend the night in. Pairs are usually very quarrelsome, but will sometimes live together without accidents, and one or two dozen of these magnificent birds in an aviary looks very beautiful.

It is necessary to take great precautions when importing Lories; while at sea they should be kept in a closed place and never be exposed to the open air. When they are landed they must be carefully kept under cover and in a high temperature until they are well acclimatized. It is for want of these precautions that so many losses occur on the voyage and after landing, and this is the main reason why Lories which are so abundantly and cheaply obtainable in the ports of Oceania and in Singapore only reach Europe in small numbers and command such high prices.

The first group is made up of rather large Lories which have square but rather long tails. Most of the birds contained in this group are quietly coloured. The following have been bred in confinement.

THE BLACK LORY (*Chalcopittacus ater*), from New Guinea, which is purplish black, the tail greenish yellow and purplish red. It is imported from time to time, together with a closely allied species from Mysol (*C. bernsteini*), which only differs in having red thighs.

THE RED-FRONTED LORY (*C. scintellatus*) has also been imported several times from the same places. It is green with a red face; the neck and back and under sides are streaked with yellow.

Lories of the genus *Eos* are much like the preceding, only much smaller and daintier. Nearly all are beautiful bright red variegated with blue or black. They are rarely imported, for they are delicate

and stand the journey badly. It is to be regretted, for they are beautiful birds.

THE BLUE-CHEEKED LORY (*Eos cyanogenys*), from the north-east of New Guinea, is red with cobalt blue cheeks and black marks on the wings, tail and belly

THE BLUE-STREAKED LORY (*E. reticulata*), from Ké Islands, is likewise red, with little blue spots on a line with the eyes, on the shoulders, and the end of the back ; black spots on the wings and tail.

THE BLUE-TAILED LORY (*E. histrio*), from Sangi Island, is red, with the crown of the head, a line from the eye to the shoulder, the upper part of the back and the wings, and the breast deep blue ; the tail also, and black and blue markings on the abdomen and wings.

THE RED LORY (*E. rubra*) is entirely bright red, except for black tips to the wings, the brick red tail, and a light blue spot in the middle of the wings. It is a native of the Moluccas. *E. goodfellowi* differs in having pale blue ear coverts, back and thighs purple blue ; it has been imported for Mr. Brooke.

WALLACE'S LORY (*E. wallacei*) is a native of the islands to the north of New Guinea. It is like the preceding except that patches on the wings, belly, and neck are black. *E. similarvata* is a near ally from Oli, imported in 1901.

THE VIOLET-NECKED LORY (*E. viciniata*), from the Moluccas, is most frequently imported. It chiefly differs from the preceding in having a black stomach, and violet neck and nape.

THE WHITE-BACKED LORY (*E. fuscata*) is very different from the rest ; it is occasionally imported from New Guinea. Its head is brown, shading into yellow on the crown ; the feathers of the back and chest are brown with yellow edges ; the underparts are red mingled with brown ; the wings and tail are brown with blue, yellow, and red tints ; the lower part of the back is white.

Lories of the genus *Lorius* have shorter tails and larger heads than the above, they are hardier, too, and more commonly imported.

THE PURPLE-CAPPED LORY (*L. domicilla*) has been a favourite cage-bird since the eighteenth century. It comes from Assam and Amboyna and is very freely imported. The Singapore Market is always supplied with them, though comparatively few reach Europe.

They are charming birds, tame and usually gentle, though they may become spiteful when paired. Their colour is a splendid red washed with yellow on the breast, which is caused by the yellow bases to the feathers. The wings are green, the primaries spotted with yellow, and the coverts blue. The crown of the head is black, passing into violet on the nape.

THE BLACK-CAPPED LORY (*L. lory*), from the north-east of New Guinea and the neighbouring islands also reach us fairly often. It is red with green wings and tail; the crown of the head is black, the upper part of the back and the belly deep blue. It has been bred in confinement.

THE JOBI ISLAND LORY (*L. jobiensis*) has also been imported. Its chief difference consists in having a wide red band across the back; *L. cyanochen*, which has a blue nape and the upper part of the back to the head, but without the red collar.

THE CHATTERING LORY (*L. garrulus*) is most commonly brought over, also the cheapest in the Singapore Market. It is all red except for green wings and tail and a yellow band across the shoulders. It has been bred in Europe and has even been crossed with Swainson's Lory. Two allied species have been imported—*L. tibialis*, which has no yellow band, and blue thighs; and *L. flavopalliat*, which has a bright yellow back.

THE SOLITARY LORY (*Calliptilus solitarius*), from Fiji, of which the London Zoological Gardens has had several and Mr. Astley has possessed two specimens, is like the preceding in miniature. Half as large, its head and belly are black, its back, wings, tail and nape green; shoulders, cheeks, throat and breast red. It is a delightful and fascinating bird, and has been termed the Ruffed Lory on account of the long silky feathers surrounding the neck.

THE VINI LORIES (*Vinia*), from Samoa, and the adjacent islands, are much like the above. *Vinia kuhli* differs in having its head green and a blue nape; *Vinia australis* has a green breast and blue crown.

The charming *Coriphili* of Haiti and neighbouring islands come in here. They are exceedingly rare and have never reached us alive; they are very small and entirely blue.

The Lories which we have still to mention are usually termed

Lorikeets and are more in the style of what are called Parrakeets ; they are rather small and have long pointed tails.

The best known genus is *Trichoglossus*, of which the popular Swainson's Lorikeet is the type.

SWAINSON'S LORIKEET (*Trichoglossus novæ-hollandiæ*) is about as big as a Turtle Dove. It is found in East Australia and Tasmania. It is a beautiful green above, has a blue head, throat, and belly ; the chest and flanks red and yellow, a spot of the same on the back. It is by far the most popular species of its whole family, as it is not delicate, can live out of doors all the year round and breeds freely in an aviary. The sexes are very much alike, but the hen is slightly smaller than her mate, with a smaller, rounder head. It has often been reared in confinement and when acclimatized is quite hardy if given a log to roost in and a good shelter from cold and damp. It is a clamorous, playful, active, and amusing bird. When paired it is very spiteful towards other kinds of Parrots, and the male and female are experts in the art of combined attack ; in this way they can put to flight and injure birds larger than themselves. They are rather less vicious towards others of their own family and are often quite harmless with small birds. A Lorikeet without a friend to assist him in fighting may sometimes become a peaceful inhabitant of a large aviary full of other Parrots.

Tame Lorikeets stay well at liberty, but wild ones unless paired to a tame mate generally leave after a while. Hen Swainson's are not very subject to egg-binding and rear their young even in the middle of winter.

THE RED-COLLARED LORIKEET (*T. rubritorques*) takes the place of the above in North-Western Australia. It differs only in having the nape of the neck orange red and its breast more orange. It behaves in the same way and breeds as readily in confinement.

The following species are all much alike and have been imported from time to time.

THE BLUE-FACED LORIKEET (*T. hæmatodes*), from Timior, differs in having a yellow breast. It is rarely imported ; its ways are similar to the preceding, but it is not often in the market.

FORSTEN'S LORIKEET (*T. forsteni*), from Sumbawa (?), is the smallest and has breast and sides entirely red. It has been bred in an aviary.

THE GREEN-NAPED LORIKEET (*T. cyanogrammus*), found from Ceram to New Guinea, has breast and sides red with blackish markings. *T. nigrigularis* takes its place further south ; it is almost identical. Another, very similar, is found to the west.

T. massena is chiefly distinguished by its bright green collar. *T. brooki* is a closely allied subspecies. *T. mitchelli*, from Lombok, has a red breast.

THE ORNATE LORIKEET (*T. ornatus*), from the Celebes, is not so much like the others ; it is green with a blue cap and behind the eye blue ; cheeks and throat, red ; breast, red washed with green. The tail is short.

MRS. JOHNSTONE'S LORIKEET (*T. johnstoniæ*), discovered in 1902 at Mindanao in the Philippines, was brought over by Mr. Goodfellow, and has been bred in confinement. Its shape is like the preceding ; its general colouring is green scaled with yellow on the breast, the forehead, chin, throat, and a line from eye to nape, red.

THE SCALY LORIKEET (*Psitteuteles chlorolepidotes*) is green, with breast and the back striated with yellow and green ; red under the wings. It lives in Australia, has been bred, and behaves like Swainson's Lory in captivity. A nearly allied species from Timor (*P. euteles*) has a grey green head and is light green underneath the body ; it also has been imported.

THE VARIED LORIKEET (*Ptilosclera versicolor*), from north-west Australia, is green above the body, the crown red, nape, cheeks and the breast yellow and mauve.

THE MUSKY LORIKEET (*Glossopsittacus concinnus*), also an Australian, has been fairly often imported, but is delicate. It is a pretty little green bird with yellow sides, the parotic regions and forehead are red and the top of the head washed with blue. This Lory exhales a rather pleasant odour of musk. *Gl. pusillus*, from South Australia, has been imported ; it is green with a red face.

New Guinea and the neighbouring islands are peopled with splendid little Lories, with strange shapes and resplendent colouring ; but alas ! they never come over to us (*Hypocharmosyna*, *Charmosynopsis*, *Oreopsittacus*). But the most beautiful of all perhaps was imported by Mr. Goodfellow and nested with Mr. Brook.

STELLA'S LORY (*Charmosyna stellæ*) defies description, its plumage combining different shades of red, green, violet, blue, and yellow most exquisitely arranged, and its form to the tip of its pointed tail is perfect. This beautiful species is found in south-eastern New Guinea.

The following species were also imported from New Guinea for the late Mr. Brooke :—

Hypocharmosyna wilhelminæ and *H. placens*, two pretty species of small size, the former smaller, green, with blue, red, and yellow marks ; the latter, larger, green also with blue cheeks and red underwings.

Charmosynopsis pulchella, whose head, tail, and under parts are carmine red, with a yellow mark on the nape, back and wings green, and blue spots on the head and back.

Oreopsitta grandis, a lovely little dark green bird, with the top of the head, tip of tail, and underwings scarlet, and dark blue cheeks spotted with white.

To sum up we must mention the small Lories with thick heads and short tails which have for a long time been considered to belong to a separate family. One species has been imported to Amsterdam from New Guinea (*Cyclopsittacus melanogenys*), a pretty little green bird with a brown and white head and orange under parts. An allied species, *C. diophtalmus*, has also been imported, in 1908.

A VERY MIXED AVIARY

By A. H. BARNES

Last year, in January as far as I remember, I purchased a pair of Bengalese which at once went to nest in a small box cage, but the cock soon died, for no apparent reason, neither did I trouble to have an inquest. The hen deserted the nest with three eggs, and I turned her in with the other common foreigners including a pair of Black-headed Nuns, by which she was welcomed, and the three sat side by side and thought of dreamy things, as seems to be their nature. I failed to find another mate for the hen, and so in despair bought a cock Spice bird.

They were all put into the outdoor aviary, and the Spice bird at once sang his husky little love-song to the Bengalese, and was accepted by her, but the Nuns were all against him and chased him away when he tried to join the family circle. Nothing daunted he built a large untidy nest of hay, with a little assistance from the lady, but then the trouble started. On no account would the Nuns allow him to enter when the Bengalese was inside. About the end of July, however, things improved and they all became more or less friendly.

I was away for a month, and when I came back there were young in the nest, to judge by the sounds that issued forth at meal times. I should think the young were about a fortnight old when I saw the Nuns also go into the nest and heard squeals and expected cold-blooded murder to be taking place ; the Spice bird meanwhile got very agitated outside but had not the pluck to go in after them. However they duly came out again and as they all seemed very much alive when their parents went in afterwards I hoped for the best. All went well, and when four youngsters came out at about a month old they were fed by their own parents and the Nuns, so much so that when I brought them indoors I could not catch them all at once and so left the Nuns and the two smallest youngsters out for another week, during which they fed them the whole time. I lost one of the young birds in the winter, also the Bengalese and one Nun, but the remainder are all merry and bright, and there is very little difference between them and the Spice bird, the chief difference being that the lacing of the breast is not quite so distinct in the young birds.

And now the comic part of the whole episode is that the other morning I heard one of the young birds singing his little husky song, but he was not singing Bengalese song or that of the Spice bird, he was giving a very good rendering of the song of a Java Sparrow ! three of which have shared the aviary. I have just bought a pair of Pekin Robins and put *them* in the aviary, and if I find this precocious youngster dead with laryngitis I shall at least know that he did his best but ambition killed him.

AMERICAN BIRD GOSSIP

(Continued from p. 61)

By JAMES B. HOUSDEN

The beautiful Brackenside Park which I have already mentioned was a veritable paradise for the naturalist, and the excitement caused by the sight of fresh birds, fresh flowers, and fresh butterflies, and the sound of fresh bird songs is not soon forgotten. The number and variety of birds in this park, much of which is virgin forest, is extraordinary.

One of the most interesting birds found here is the Mocking Bird (*Mimus polyglottus*), the "Mocker" as he is locally called, and one of the chief of songsters, which possesses not only a song unrivalled in variety of notes, but also remarkable powers of imitating the songs of other birds. Some morning one may hear a Robin's song from a tree near by; a Red Bird answers him, and then an Oriole chimes in, but when one tries to find the three bright birds he finds only the Mocker. At another time I mistook one particular bird's melody for that of a Thrush, the imitation being perfect. I have often been awakened at midnight on brilliant moonlight nights by his song.

The nest of the Mocker is carelessly made of almost anything he can find; I have found it in many strange places, usually with five bluish green eggs, very much like those of the Catbird.

The Meadowlark (*Sturnella magna*) is found in great numbers in the more open grounds, the rich yellow plumage of the throat and breast, with the prominent black crescent on the breast, is not observable when the birds are walking in a mule track or on the grass.

It builds a snug arched nest with dried grasses and other material, lined with finer grasses. Nesting on the ground, its eggs and young are exposed to many enemies, chief amongst which are snakes which destroy both eggs and young birds.

The Yellow-headed Blackbird (*Xanthocephalus*) is found generally distributed on the prairies in all favourable localities throughout Texas, collecting to breed in colonies in marshy places, often in company with the Red-winged Blackbird. In the Yellow-heads the whole head and neck are a brilliant yellow, the rest of his attire is shining black. The eggs are from two to six in number, but the usual number is four,

a dull greyish white with small blotches of purplish brown. The Blue Grosbeak (*Guiraca carulea*) is found in all the Gulf States from the Atlantic to the Pacific. The male is brilliant blue, darker across the middle of the back, the female brownish yellow, darker on the breast and tail. The young resemble the female. Two broods of young are usually reared in the season.

The family of Tanagers is remarkable for the number of species, the gaudy colouring of many, and the interesting fact that they are confined to the American mainland and adjacent islands.

This family includes approximately (so one American writer says) three hundred and eighty species; of these only four are known in Texas. The male of the Louisiana Tanager (*Piranga ludoviciana*) is a beautifully coloured bird; the female is plainly coloured, but still beautiful with its olive green plumage. They build a shallow nest, eggs three to five in number greenish blue in colour, speckled with brown and purple.

The Scarlet Tanager (*P. erythromelas*) is the best known of the four in the Southern States; he makes his home in the woods, and when migration takes place in the spring, chiefly from Central and South America, the males arrive at the site of their summer home a few days before their mates, and are sometimes seen in small parties, forming a brilliant group.

The nesting season begins in the latter part of May, the nest being built in low thick woods or in a tangled thicket; very often also in an orchard, on the horizontal limb of a low tree or sapling. It is loosely made of twigs and fine bark strips, and lined with rootlets and fibres of inner bark. The eggs are from three to five in number, and of a greenish blue, speckled and blotted with brown, chiefly at the larger end.

The male of the Summer Tanager (also called the summer Red-bird) is vermilion red when adult; the plumage of the female is less attractive. The cock bird requires several years to attain full plumage. Immature individuals show a mixture of red and yellow, the amount of each colour varying according to age. The female is a dull orange colour.

The nest is compactly built of a cottony weed, with Spanish moss, and lined with fine grass stems. The eggs are beautiful, being a bright emerald green, blotched with shades of lilac and dark brown.

(To be continued.)

NOTES ON THE NYASA LOVEBIRD

By DR. MAURICE AMSLER

I think many will agree with me when I say that if one has pairs of the same age the sexing of some species of Lovebirds is not difficult. In the case of *Agapornis roseicollis*, of which I have at different times had several true pairs, the cock was always the handsomer and deeper coloured of the two.

I only possess one pair of the new Nyasa Lovebirds; they are a true pair, and I believe have young at the moment. The hen is recognizable at a glance, being of a much lighter salmon colour than the male. It is possible, of course, that the male is an older and therefore a better coloured bird.

This species appears to be a very ready breeder, as I hear of nesting on all sides and also of clear eggs!

My own pair were kept in a small wire cage for a few days, but the moment I placed them in a large box cage some three feet long with a nest box attached they disappeared into the nest, and at once started to make nesting material of their perches.

Nothing came amiss to them; sticks as thick as a lead pencil, millet sprigs, hay, twigs, and more especially bark, which they chewed off green willow twigs. These birds are in a living room, and I have had many opportunities of watching them, yet I have never seen them put their nesting material under their rump feathers as do the Peach-faced and Black-cheeked Lovebirds. Both sexes incubate, sometimes separately, more often together, building continues after the laying of the first egg. I counted up to five, after which it was impossible to get a view of the nest cavity without seriously disturbing the nest and possibly breaking the eggs.

A. lilianæ is often called the Nyasa "peach-faced" Lovebird. This is a misnomer, I feel sure, as the species is much more closely allied to the Black-cheeked (*A. nigrigenis*); its size, shape, quick movements, white circum-orbital zone, and especially its call and alarm notes constantly renewed, are of the Black-cheeked Lovebirds which we all bred so freely some years ago.

Mr. Seth-Smith very rightly says that we must try to preserve the

species—a chance flock appears to have been encountered and it may be many years before we get another importation.

If, as I expect, these birds are freely bred, it will be well for members to make exchanges of their young stock so as to avoid inbreeding. The sexing of these young birds may be difficult, as pointed out by Mr. Bearby in the April number of the Magazine, but if one decides to exchange only one sex, say the males, there should be a sufficient number of correct guesses to prevent excessive inbreeding.

AVICULTURAL NOTES

In a letter dated 30th March from Major A. E. Snape to the Honorary Secretary concerning the production of the AVICULTURAL MAGAZINE, the following paragraph appears :—

“I would like to mention here that I have received eight or nine letters from members stating that they are dissatisfied with the present Magazine, as nothing of a helpful nature has been shown for a very considerable time and it would appear that nearly all the matter has been copied from other journals or taken from Continental experience, which is vastly different from English, owing to climatic conditions, etc., etc. I just mention this as a matter of interest, and for the benefit of all concerned.”

It is certainly a matter of very great interest to the Editor to hear that his work and that of the members who give up their time to provide a magazine for the great majority who merely read it, does not please Major Snape and his eight or nine correspondents. All we can say is that we have done our best to improve the Magazine, and if the contents thereof do not please the members it is the fault of those who do not write (such as Major Snape and his eight or nine correspondents) and so deny us the pleasure of publishing the matter that would be of a “helpful nature”.

We must take strong exception to the statement that “nearly all the matter has been copied from other journals”. It is true that the special articles, intended eventually for the book *Aviculture*, appear simultaneously in English and French, in the AVICULTURAL MAGAZINE and *L'Oiseau*, this arrangement having been fully explained in the Magazine when the series commenced in January, 1924, but we never copy from other journals unless there is some very special reason for doing so.

On several occasions our Magazine has consisted of 32 pages, some eight pages more than at any time since the war, and the number of plates published has been equal to that of the most flourishing period of the Society's existence. We frankly admit that we cannot understand what Major Snape and his friends have to complain of. We should naturally all like an even better Magazine if we had the money to produce it and if members would send us more copy (we fail to find Major Snape's name in the list of contributors), but it is a little discouraging, when members give up their spare time and put in a lot of work to make the Magazine a success, to receive complaints such as that of Major Snape.

At the same time we would like to say that any suggestions from members, or just criticism, will be very carefully considered ; but we do not feel that those who never contribute themselves are quite in a position to criticize the contributions of others.

Dr. J. du Berrie claims to have been very successful in breeding foreign birds in cages, and a small indoor aviary. Writing in *Cage Birds* of 27th March he remarks :—" Most of my blue-bred Budgerigars were bred in cages 1 foot square. The under-mentioned birds I have been successful in breeding last year in a small indoor aviary : Indian Babblers, Spreo Starlings, Green Glossy Starlings, Abyssinian Lovebirds, Blue-winged Lovebirds, Red-crested Cardinals, Cordon-bleus, Fire Finches, Missel Thrushes, and Budgerigars.

" In one part of the aviary I had altogether one pair Red-crested Cardinals, one pair Abyssinian Lovebirds, and a pair of Blue-winged Lovebirds, and about ten pairs of various Budgerigars, all of which nested and reared young.

" In the centre part of the aviary I had one pair of Indian Babblers, one pair Long-tailed Glossy Starlings, two Cassiques, one pair of White-throated Jay Thrushes, and one pair of Indian Mynahs. All these nested barring the two Cassiques and the White-throated Jay Thrushes. The young I took away and hand-reared.

" In the other side of the aviary I had one pair Missel Thrushes, one pair of Spreo Starlings, one pair of Green Glossy Starlings, and one only Purple-headed Glossy Starling. All these nested, and I hand-reared most of the young ones.

“ At present I have going to nest in cages one pair of Rosella Parrakeets and one pair Pennants' Parrakeets. These four are together in a large cage in the sitting room.”

Aviculturists would like to know the secret of Dr. du Berrie's success, for he must certainly have some method of inducing his birds to breed under what would generally be considered most unfavourable conditions. To breed Budgerigars in a cage of only 1 foot square is an achievement, but to breed Indian Babbler, Long-tailed Glossy Starlings, and Indian Mynahs in a small indoor aviary which they had to share with Cassiques and White-throated Jay Thrushes sounds almost incredible. And what would most aviculturists say to the idea of attempting to breed a pair each of Rosellas and Pennants in the same cage in a sitting room? Certainly Dr. du Berrie must possess some very valuable secret; or is he trying to pull somebody's leg?

The Nyasa Lovebird seems to be a most accommodating bird, and if any foreign bird is adapted for breeding in a cage it seems to be that species. It has only quite recently arrived, but many aviculturists seem to have either eggs or newly hatched young. We hope that our members will send us as full accounts as possible of the nesting of this Lovebird in their aviaries.

We are glad to be able to announce the forthcoming appearance of Dr. Hopkinson's *Record of Birds which have been bred in Captivity* at which he has been working, during his leaves from service in West Africa, so long.

It will be published by Messrs. H. F. & G. Witherby, of High Holborn, and is expected to be ready early in the autumn.

The work, which records the successful breeding of more than 800 species of birds and about the same number of hybrids, will be a great addition—if not an absolute essential—to any avicultural library.

We are also able to announce that Messrs. Bernard Quaritch, of 11 Grafton Street, New Bond Street, W.1, will shortly be issuing a revised edition of *Parrakeets*, by Mr. Seth-Smith. This book has been unobtainable for some years past, but a limited number of copies of the letterpress have been traced. These will be republished with a new introduction and a supplement bringing the work completely up to date

CORRESPONDENCE

MISFORTUNE WITH BUDGERIGARS

SIR,—I shall be grateful to you if you will include this letter in your next issue of the Magazine, in order that other people may benefit by the terrible misfortunes which I have had with my Budgerigars.

I moved into a new house at the beginning of the year, and I had built a large aviary to take twenty-four or more nesting pairs. It was built of concrete and brick with flights both indoor and out. It has stove, electric light: everything quite perfect. On the second day, however, two Blue-bred Budgies died. They had looked quite fit a few hours before, and I was puzzled. A day or so afterwards a sort of epidemic began. My husband examined two of the birds and came to the conclusion that they were poisoned. Mr. George Hedges, hearing of my trouble, kindly came to see if he could help. He thought it possible that the hazel branches (used as perches) which had stood near some apple-trees in this garden might have been sprinkled with insecticide; I therefore removed the branches and sent a twig to be analyzed. The report was that there was arsenic on the twig. So I thought that I had now got to the end of my troubles.

All went well for about a fortnight, when the same illness broke out once more. I sent three birds to Mr. C. H. Hicks, who telegraphed that they had died of acute peritonitis, owing to some tiny particles of tin, zinc and lead. I examined the wire of the flights and found that it had been very badly galvanized, and that I could pick off with my fingers pieces as big as a pin's head. I sent for an ironmonger and set him to work scrubbing the wires with an iron "boiler-brush". He removed (literally) handfuls of metal dust; it was very hard work, and it took him about a week, but since then I have not had a bird ill.

In all I lost two Cobalt Blues, eight ordinary Blues, and seven Blue-breds. All seventeen birds were hens (of course, my best hens). The cocks did not seem to be affected in any way. The illness was similar in the last ten or twelve cases, and was very easily recognized. A perfectly healthy bird would become mopey, sleepy and distressed. In an hour or so very violent diarrhoea would begin, and the bird would die within four to twelve hours.

There was undoubtedly arsenic on the branches, and this may have been the cause of the first deaths. Anyhow, I want to warn your readers against: (1) The danger of using branches which have been near fruit trees, and (2) against the danger of using galvanized wire until it has been carefully examined.

DORA E. WALL.

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During the past six weeks we have probably handled more rare Birds than have been seen in this country for a very considerable period of time, and it may be of interest to our readers to hear that we are in a position to secure such desirable stock.

The rarities include a pair of the very rare **New Zealand Parrakeets** (*Cyanochamyus cooki*), 2 magnificent **Australian Black Cockatoos**, 1 pair of the **Elegant Parrakeet**, 2 pairs of **Turquoise Parrakeets**, 4 specimens of the very rare **Golden or Queen of Bavaria's Conure**, 10 very fine **Abyssinian Splendid Sunbirds** (*Cinnyris abyssinicus*), **Abyssinian Pigmy Falcon**, **White Budgerigars**, **Scarlet Ibis**, **White Egrets**, **Giant Anteaters**, **Three-toed Sloth**, **Brazilian Tapirs**, **Ocelot Cats**, **Peacock Pheasants**, **Tantalus Storks**, **Maguire Storks**, 4 different varieties of **Trumpeters**, etc.

It will be of great interest to our readers to hear that one of our collectors has just left Cape Town on board the s.s. "**LLANSTEPHAN CASTLE**" with a superb collection of the very rare **BLACK-CHEEKED LOVEBIRDS** (*Agapornis nigrigensis*), one of the most attractive and desirable of Lovebirds, which has practically not been seen in this country since the War, and all interested in acquiring a pair or pairs of these most delightful Birds should not fail to notify us of their requirements, as the demand is certain to exceed the supply.

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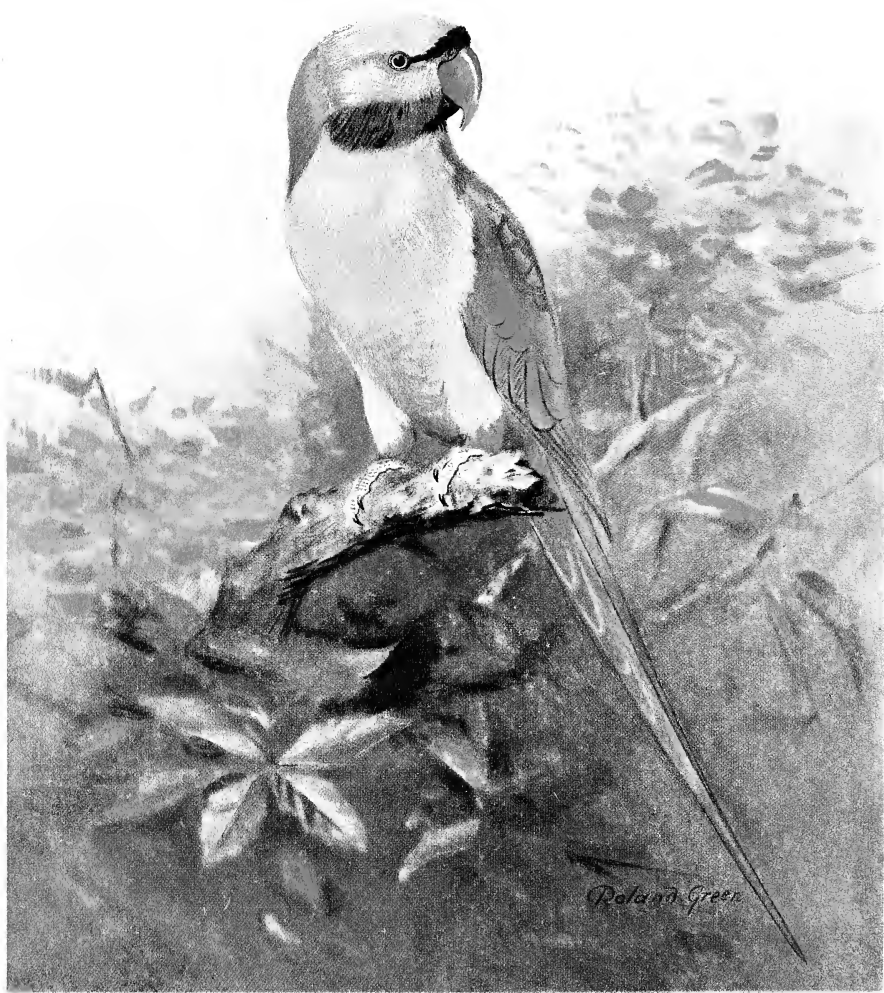
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IN FREEDOM & CAPTIVITY

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JUNE, 1926.

THE DERBYAN PARRAKEET (*PALÆORNIS DERBYANA*, FRASER)

This very fine and rare Parrakeet was first described from a specimen living in the aviary of the Earl of Derby at Knowsley in 1850. In a communication to the Zoological Society of London, published, with a coloured plate in the Society's *Proceedings* of that year, Mr. Louis Fraser wrote :—"The first specimen to which I would wish to draw the attention of the Society is a Parrakeet of large size, which I propose calling *Palæornis derbyanus*.

"The specimen has been for many years in this collection, and I have chosen for its specific name that of its noble owner. The species is easily distinguishable from all other members of the genus by its large size, and the colours of the bill, head, and breast."

The type specimen, a female, is now in the Liverpool Museum. Two others, also females, were deposited by the Hon., now Lord, Rothschild in the Zoological Gardens in 1899, and lived there for some years.

In 1924 Mr. John Frostick obtained a fine male specimen from a ship hailing from China, which passed into the possession of the late Mrs. Dalton Burgess, and at her death into that of Mr. F. G. Hedges.

When first received Mr. Frostick identified this bird as *Palæornis salvadorii* from specimens so named at the British Museum, and this

individual was exhibited under the name of Salvadori's Parrakeet at an exhibition held at the Crystal Palace in February last, when it rightly secured several important prizes.

Professor Oustalet gave the name of *P. salvadorii* to some specimens received from Tibet and North-West China, whereas the typical *P. derbyana* was said to inhabit Hainan, but there are specimens from both localities in the Tring Museum, and a careful study of these has convinced Lord Rothschild that the two cannot be separated, and the name *Palæornis salvadorii* of Oustalet must therefore be regarded as a synonym of *P. derbyana*, Fraser.

The coloured plate published herewith was drawn from the very fine living male specimen now in Mr. Hedges' possession, and an excellent plate of the female, drawn by Joseph Wolf from the type specimen, was published in the *Proceedings of the Zoological Society* for 1850.

A comparison of these two illustrations shows clearly the difference in the coloration of the sexes, the chief distinguishing characters being in the colour of the bill, which is red in the male and black in the female, and the under-surface, which in the male may be described as lilac-blue, whereas that of the female is very much more of a rosy pink, and was originally described by Louis Fraser as "rose-coloured purple". However, individual specimens vary considerably in the depth of the colour of the under-surface. This bird is some twenty inches in total length.

D. S.-S.

BREEDING THE ABYSSINIAN LOVEBIRD IN GERMANY

A very interesting account of the breeding of *Agapornis taranta* from the pen of Herr Ed. Schütze appears in the current number of a publication known as "A. Z." (*Austausch Zentrale der Exotenliebhaber und Züchter*).

This species was first imported to Germany in 1906, when a few specimens arrived. Others did not arrive until 1923 and these were received from England. The price was at first about 120 marks per pair, but it soon fell to half that, and now they can be obtained for

some 15 marks for a pair. The first to arrive were in poor condition, and the species got the reputation of being delicate, but later arrivals were extraordinarily strong, though needing to be kept moderately warm, otherwise they were found to be susceptible to disease.

In the autumn of 1924 a pair of these Lovebirds was placed in an aviary (about 6 feet by 8 feet) inhabited by other birds such as Budgerigars and Grassfinches. Here they took possession of a nesting box, and lived with their companions on friendly terms.

At the end of January, 1925, the female remained in the nesting box, and appeared to be incubating. On the 17th of February, an examination was made which revealed three almost round eggs. Another inspection on the 23rd showed two young ones hatched, the third egg being unfertile, the size of the eggs being 23·18 mm. The incubation period appeared to be about eighteen days, but could not be ascertained precisely. The female very seldom left the nest, and when she did it was only for a very short time. She was diligently fed by the male. From the 26th February onwards the female was more frequently out of the nesting box. The male did not, as yet, feed the young direct, but he regularly fed the female, who fed the young, which cried out loudly. This changed early in March, when the male took part in the feeding of the young. By 16th March the young were almost feathered, and when removed from the nest-box made no complaint but squatted on the ground.

On the 19th March they looked out of the box for the first time, but the first young one did not leave the box until 29th March. In size and colour the young, on leaving the nest, resembled the female, except that the red of the beak was paler. The second young bird left the nest four days after the first. Both proved to be females. On 9th April the young began to feed themselves, but were still diligently fed by their parents. By 27th April the young were independent of their parents, though these still fed them occasionally until 4th May.

For the first weeks the young birds were given soft food containing ants' eggs and hard-boiled egg. On this food they thrived, and later took to eating seed, especially millet, but they also took nearly all kinds of bird-seed, including oats, sunflower, and grass seed; also green food. Hemp they did not care for. They bathed frequently.

A very interesting point observed was that these birds built no nest as other Lovebirds do, but the female plucked the feathers from her breast with which to form a nest platform.

Herr Schütze goes on to say that he does not advise the keeping of these Lovebirds with other small birds during the nesting period, as he has known of cases in which they have become spiteful and bitten the legs of their companions

COCKATOOS

By THE MARQUESS OF TAVISTOCK and J. DELACOUR

Cockatoos are a family of large Parrots peculiar to Australia and the neighbouring isles ; they have crests and square or slightly scalloped tails. They have very different habits and diet, but they all have extremely powerful beaks, and can use them to such purpose that ordinary wire netting cannot resist them. They destroy wood with the greatest ease, and feed on seeds in an aviary as when at liberty. Most of them live well in cages, and as they are graminivorous they are easily kept.

The sexes of those of the genus *Cacatua* can be distinguished by the colour of the eyes, those of the male being black, and those of the female brown.

THE GREAT BLACK COCKATOO (*Microglossus aterrimus*) is noticeable above all other Cockatoos by its enormous beak, its large crest and short tail, black plumage, and cheeks of which the bare skin is pink. It lives in Northern Australia and New Guinea. This bird ornaments the tree where it nests with pieces of palm leaves. It is not common in confinement, where it is easily fed and is tame and gentle. Its note is a shrill whistle.

THE BLACK COCKATOOS (*Calyptrorhynchus*) are peculiar to Australia. They have large rounded beaks, rather short thick crests, long wings and tails. They live in woods, and tear the bark off trees in order to find grubs, of which they are very fond. The various species are all very much alike.

THE BANKSIAN COCKATOO (*C. banksi*) is a native of South-East

Australia ; the adult male is black, with a scarlet band across the sides of the tail. The female's head is more or less spotted with pale yellow, and her breast is barred with the same and dull red ; the base of the tail is yellowish, or yellowish red spotted with black. There are several kinds which differ from one another in size and up to a certain point in the colouring of the female. Young birds closely resemble the females, but the young males are always darker than females of the same age. They take four years to acquire their full adult plumage, and in the last transitional phase they are all black, and the red band on the tail is spotted with black.

On account of its loud screams and its power of breaking out of its aviary, by means of its formidable beak, the Black Cockatoo is by no means everybody's bird, but it has so much personality and charm of its own that it is very interesting. Birds taken after they are full grown are quite untameable, and seldom live long, but young ones taken from the nest become much attached to mankind. This is particularly so with male birds, for the hens are less gentle and affectionate. Banksian Cockatoos do not like being touched, and even the tamest suffer rather than enjoy fondling, but they delight in being spoken to and being allowed to perch on their master's head or shoulder. Male birds become so devoted that if they are intended to breed they must not be made too much of, or they will neglect their mates for the sake of their human friends.

Black Cockatoos should be fed on hemp seed, sunflower seeds, and peanuts, together with Brazil nuts if they will take them. They are very fond of oak apple grubs, and some will eat smooth caterpillars.

On acquiring a Black Cockatoo inquiry should be made as to which seeds it is accustomed to feed on, for they will sooner die of starvation than take to new foods. They are very sensitive birds, and often refuse food for two or three days in a new place. There is no need to be uneasy at this, for they have a great power of fasting. One of my birds lived fourteen days without food of any kind.

Black Cockatoos are generally gentle and peaceable with other birds, and if they sometimes put on a threatening aspect it is caused by fear. But male birds become very jealous of each other, especially tame ones, and cannot be put together.

These birds cannot stand cold as well as their white cousins, but they can bear a few degrees of cold ; fog and snow do them more harm ; it is better to give them some warmth in winter. They are long-lived if well cared for, some of mine must have been in confinement for forty years at least, and show no signs of age.

They have laid and incubated in confinement, but so far young have not been reared.

Tame specimens may be allowed their liberty, but at first it takes some trouble to teach them to leave their abode ; like many of the larger Parrots they are afraid to come down beyond a certain height. When in flight they are curious and imposing, their long wings and tail making them look like aeroplanes. A fine old male which I owned had a habit of flying by night and uttering his loud weird mournful cries. The sight of him both by day and night frightened the wild birds, and, strange to say, my Australian Parrots, but he would not have hurt a fly. He was very fond of one of the gardeners, and would follow him when he rode home on his bicycle about three miles off, and return at evening to the window-ledge which was his favourite perch.

THE WESTERN BLACK COCKATOO (*C.c. stellatus*), which is a native of Western Australia, is smaller and has a rounder crest. Its habits are the same.

Living specimens of the following have been imported :—

C.c. macrorhynchus from Northern Australia.

THE FUNERAL COCKATOO (*C. funereus*), from the south-east of Australia and Tasmania, is dark brown mixed with yellow, and with a yellow spot on the cheeks. The sexes are alike. I had a female for some months, she was tame, but rather vicious.

C. viridis from the south-east has also been imported. It differs from the Banksian in having a weaker beak ; the female has less yellow about her.

THE GANG-GANG COCKATOO (*Callocephalum galeatum*) has fine grey plumage, barred like a Cuckoo, shading into yellow on the wings and underparts, a red head, ornamented with crest slightly curved forward. The female's head and crest are grey, but all her body is shaded with red and yellow, especially the breast and underparts. The

sexes are distinguishable even in extreme youth. This fine bird inhabits South-East Australia and Tasmania.

The Gang-gang becomes tame and affectionate, and can be left at liberty all the year round if its owner does not mind seeing it break off cypress branches when it is eating the seeds. In captivity, it must not have either hemp or sunflower seeds, with these exceptions its food is the same as for other Cockatoos ; it likes fruit. It does better in an aviary than in a cage.

This species has bred in an aviary, and a pair belonging to Mme. Lécallier has reared young each year for three years. It has also nested at liberty in Europe. The Gang-gang is spiteful to other Cockatoos ; its flight is silent like that of an Owl.

THE SULPHUR-CRESTED COCKATOO (*Cacatua galerita*) is well-known as a cage-bird. It is very common in Australia and Tasmania. It is a hardy long-lived bird in confinement ; it becomes much attached to its keeper and allows itself to be handled and sometimes makes a good talker. But if it gets excited it screams horribly. The sexes are alike, white, with crest and under the tail pale yellow ; but the eye of the female seen in a good light is dark brown, while that of the male is black. It has bred in confinement.

It is a striking and interesting bird when at liberty, but as it is likely to stray it is wise to warn one's neighbours.

When a pair of any kind of Cockatoos is let loose, it is prudent to choose a really devoted couple, and to liberate the male bird only for several months, then to catch him up again, and let the female out for the same length of time. Afterwards they can safely be allowed out together. This species is not friendly with other birds. Its food should be a mixture of two parts of canary seed to one of oats, half of hemp, half of sunflower, and one of maize, pea nuts, fruit, and green food if it will eat it.

There is a closely allied species in New Guinea which differs only in being somewhat smaller and having the skin round the eye more lead colour.

THE LESSER SULPHUR-CRESTED COCKATOO (*C. sulphurea*) is distinguished from the above by its much smaller size, yellow spot on its cheeks, and yellow plumage generally. The male has black eyes, and

the female reddish. It requires the same treatment as the larger species. It is found in Celebes, where it is very commonly kept in confinement.

C. parvula, from Timor, is distinguished from the above by finer bill and its plumage being of a purer white.

THE CITRON-CRESTED COCKATOO (*C. citrinocristata*) from Sumba differs only in having a fine orange-yellow crest. It is rare in confinement.

LEADBEATER'S COCKATOO (*C. leadbeateri*) is the finest of all the Cockatoos. It is very hardy and breeds readily. It is white above, pink beneath and under the wings and tail, and has a salmon-red crest marked with yellow. The male has black eyes, the female brown. This fine bird inhabits the south and interior of Australia. It is very noisy, and although it can be tamed and taught to speak a few words, it is less confiding and affectionate than the Sulphur-crested Cockatoos. It has been bred in Europe, both in confinement and at liberty; both sexes shared the incubation. It requires the same treatment and the same food as its congeners, but is not to be trusted with other birds.

THE WHITE COCKATOO (*C. alba*), from the Moluccas, is pure white but for a slight yellow tinge at the base of the feathers of the wings and tail. It is a large bird, and its very powerful head is ornamented by a large round crest.

It becomes very tame in captivity, very affectionate, and often speaks extremely well. It is inclined to pluck itself in a cage and should accordingly be given wood to gnaw for the sake of occupation. It should only be given hemp seed and sunflower seeds sparingly. It has a loud and disagreeable scream.

C. ophthalmia is a very near relation, but its crest is tinged with yellow.

THE MOLUCCAN COCKATOO (*C. moluccensis*) lives in Amboyna and is like the preceding. It is a magnificent bird, nearly as beautiful as Leadbeaters. It is roseate white, and the feathers in the interior of the crest are bright orange. It becomes very tame and learns to speak but its scream, fortunately rarely heard, is enough to wake the dead! It is said that it will stay well at liberty and can endure cold well. It should be treated like the above. The hen has brown eyes, the cock black. It is spiteful towards other birds.

THE BARE-EYED COCKATOO (*C. gymnopsis*), from Australia, is known



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Alexandrine Parakeet
(*Palæornis indoburmanicus*).

Banksian Cockatoo,
(*Calyptorhynchus banksi*).

Lear's Macaw,
(*Anodorhynchus leari*).

Pesquet's Parrot,
(*Dasyptilus pesqueti*).

Moluccan Cockatoo,
(*Cacatua moluccensis*).

Greater Sulphur-crested Cockatoo
(*Cacatua galerita*).

by its short straight crest, and by having its eyes surrounded by bare lead-coloured skin. The male and female are alike. It is white, tinged yellow under the tail, its face and crest being spotted with rose colour.

It is gentle and speaks well in confinement, but is spiteful to other birds. It damages trees if at liberty. When kept in a cage it must not have hemp or sunflower seed as these upset its liver.

C. sanguinea, which inhabits the same regions, and only differs from the above by the absence of bare skin under the eye, is perhaps only a variety.

GOFFIN'S COCKATOO (*C. goffini*), from Tenimber Island, is a miniature of the above. M. Delacour has remarked of a specimen which lived for many years in confinement, that while it was pure white when kept indoors, it turned bright pink when in the open air; the change taking place within a few days.

DUCORPS COCKATOO (*C. ducorpsi*), from the Solomon Islands, is white, with crest, cheeks, vent, and under the wings pale yellow.

THE PHILIPPINE COCKATOO (*C. hæmaturopygia*) is white, but has crest, cheeks, and under-tail feathers pale red; it is yellow under the wings and tail. This species and the four which precede it are allied forms.

THE ROSEATE COCKATOO (*C. roseicapilla*), from Australia, where it is known as the "Gallah", is a handsome bird, well known to everyone, its only fault is its disagreeable voice. Its wings, back, and tail are pearly grey, its head, neck, and breast are a beautiful pink, mixed with white on the crest, which is short and rounded.

It becomes tame and affectionate in confinement, and is by far the gentlest of the Cockatoo tribe towards other birds with the exception of the Black Cockatoo. It may be kept in an aviary made of strong wire netting. It is not a good talker, and rarely learns more than one or two words.

When acclimatized it can stand the winter in the open air, but the female should not be allowed to go to nest either in the aviary or at liberty as long as the cold weather lasts.

This species has reared young at liberty and in an aviary, and it has been crossed with *C. sulphurea*, but the young are very delicate

during the first six months and highly susceptible to chills and other diseases. When in breeding condition the hues of the neck and breast become more intense, and there is no doubt that this is due to repigmentation of the feathers, as there is no sign of moulting. Both sexes incubate, but the male only replaces the hen for a short time when she goes off to feed, and does not stay on the nest as do other kinds of Cockatoos.

Albino Roseate Cockatoos have sometimes been taken in Australia ; they are very pretty, as they keep their rose-coloured breasts, but no such albino has yet been brought to Europe.

The male Roseate has black eyes, the female nut brown.

These Cockatoos are delightful at liberty, but it is not easy to induce a pair to stay. The greater number leave at once, some may remain for weeks or even months, and then go. The best plan is to get a wild cock and a tame hen, but not so tame that she will let strangers pick her up. When the birds have become attached to each other the cock may be released for some months, then after catching him up, release the hen for the same period, afterwards allowing both to be at liberty together. The hen must be shut up in an aviary from October to April to keep her from going to nest during the cold weather.

It is pretty to watch the flight of Roseates and they appear thoroughly to enjoy their freedom. They do not injure fruit or trees often, though they may occasionally peel the bark off a branch, but not to any great extent.

They sometimes fly away from their home, and are chased by Rooks and Jackdaws, but if these become a nuisance a few shots will teach them to mind their own business. Roseates should be fed like the Yellow-crested Cockatoos.

THE SLENDER-BILLED COCKATOO (*Licmetis nasica*) also inhabits Australia ; in shape it resembles the Bare-eyed Cockatoo, but has an even shorter crest, and its long, slender, slightly curved beak gives it a peculiar appearance. It is fairly large, white, with rose-coloured spots and red-tinged head, neck, and breast ; the eye is surrounded with a rather large patch of bare bluish skin.

The sexes are alike. This kind does well in captivity, and becomes extremely tame and affectionate, and often learns to talk. It should

have the same treatment as the other Cockatoos, minus sunflower seed and hemp. Some individuals like raw carrot.

L. pastinator is also imported; it is merely a local form of the above occurring in Western Australia, slightly larger and more rose-coloured.

THE COCKATIEL (*Calopsittacus novæ-hollandiæ*) is placed after and next to the Cockatoos; like them it has a fine crest and belongs to Australia. It is a well-known bird; the male is grey, with white shoulders, head and crest yellowish with orange-red cheek spots. The female is distinguished by having the two outer feathers of the tail yellow, spotted with black and a greyish head.

Cockatiels generally agree very well with other birds, but breeding couples may quarrel amongst themselves. They are very prolific, and rear several broods in succession, laying a great many eggs. Both sexes incubate.

The Cockatiel is very hardy and endures cold better than almost any other Parrot. When tamed it makes a delightful companion, and can be taught to say some words. Unfortunately, it does not stay well at liberty, though a male whose mate is shut up, and who has no other companions, sometimes stays about his owner's garden until taken by Owls. It is advisable to release him hungry on a calm day, winter is the best time for the experiment, for he will only perch on bare branches. Its flight is extremely graceful and powerful, and so delightful to watch that one is almost resigned to losing the bird.

Cockatiels should be given two parts of canary seed to one of oats and one of hemp, with all kinds of green food.

Now we come to a particular family of tiny Parrakeets belonging to New Guinea and the neighbouring islands, the PIGMY PARROTS (*Nasiterna*), which have large heads and short, square tails, which remind one of Cockatoos. They all have brilliant colouring, and measure at most 3 to 4 in. in length. Unfortunately, these fascinating little birds have never been imported. They are seed eaters, and should not be difficult to keep.

MACAWS

By THE MARQUESS OF TAVISTOCK

Macaws belong to a group which includes the largest of the Parrakeets, having enormous beaks and very long tails. They are all natives of the tropical parts of America, and many kinds, which have now vanished, inhabited the Antilles Islands. They live in woods, and always fly about in pairs. Their large size and powerful beaks make them difficult to keep in aviaries, for which reason they are generally kept chained to their perches. But unless they can be given a properly constructed aviary, or can be allowed to fly loose, it is better not to keep them at all.

Once acclimatized, the larger species stand cold well, and may be wintered out of doors. With the exception of the dark blue kinds (*Anodorhynchus*) they stay well and are less destructive than would be supposed when given their freedom. They may have some of their wing feathers clipped for greater safety. A Macaw flying from tree to tree is a wonderful spectacle. They are not particularly vicious with other birds, rarely using their powerful beaks to attack them. When domesticated they manifest great affection towards their owners, some even talk very well, but their natural voice is proportionate to their size !

Their food should consist of seeds—two parts of canary, two of oats, one of wheat, one of maize, one of hemp, one of sunflower, together with monkey nuts and fruit. Very young birds should have bread and milk as well, a food which is bad for most Parrakeets, but does not appear to harm young Macaws. They are very long-lived.

THE HYACINTHINE MACAW (*Anodorhynchus hyacinthinus*), from Central Brazil, is an enormous bird, its colour a magnificent deep blue ; its nature is particularly gentle and reliable. It is quite hardy, but does not stay well if at liberty. Young birds require bread and milk, which should be left off after a time.

LEAR'S MACAW (*A. leari*) likewise comes from Brazil, it is smaller than the preceding, and not such an intense blue. I have succeeded in keeping one or two at liberty, but it is very difficult to make them stay. It is an affectionate species, and speaks very well ; it is quite

hardy, and I had a freshly imported one which went without food for two days and two nights on the top of an oak tree in the depth of winter. It was in bad plumage, but did not suffer in the least. The sexes are identical.

THE GLAUCOUS MACAW (*A. glaucus*), from Southern Brazil, and the Argentine, is still smaller and greyer. It is very seldom imported.

SPIX' MACAW (*Cyanopsittacus spixi*), from Eastern Brazil, is the smallest of the blue Macaws, more like a large Parrot. Its colour is pale blue, greyer on the head. It is a charming bird, but very rarely imported. It has laid in confinement.

THE BLUE AND YELLOW MACAW (*Ara ararauna*), very well known. It is found from Columbia to Paraguay. It is a very beautiful bird, and has been bred in confinement.

THE RED AND YELLOW MACAW (*A. macao*), which is found from South Mexico to the Amazon and Bolivia, is another very popular bird, light red and blue, with yellow on the wings.

THE RED AND BLUE MACAW (*A. chloroptera*) is almost as common as the preceding. Its range is from Guiana to Bolivia; it may be distinguished by its darker red colouring and blue and green wings.

THE MILITARY MACAW (*A. militaris*) is a native of Mexico, Columbia, Peru, and Bolivia. It is a fine golden-green bird with red forehead and middle tail feathers. The wings and the rest of the tail are mostly blue. It is fairly often imported, but not quite so frequently met with in Europe as the above.

The Macaws which have still to be mentioned are much smaller. Their colour generally speaking is rather deep green, relieved with blue, red, brown, or yellow.

THE SEVERE MACAW (*A. severa*), inhabiting Panama and Brazil, has blue wings and tail, washed with red underneath, its head is bluish, forehead and chin brown, the fold of the wing red.

ILLIGER'S MACAW (*A. maracana*), found in S. Brazil and Paraguay, is smaller. It has a rose-coloured forehead, and two red spots on the back and belly. *A. couloni*, from Peru, is distinguished only by the absence of the rose and red spots.

THE GOLD-NECKED MACAW (*A. aureicollis*), from Bolivia and Paraguay, has a blackish-brown head, and a wide yellow collar behind its neck.

A. macavuanna, from Guiana, Brazil, and Bolivia, has a greythroat and breast, and brownish-red abdomen.

A. nobilis, from Brazil ; *A. hahni*, from Guiana and Venezuela, are green with blue foreheads.

AVICULTURAL NOTES

The arrival in London of four living examples of that wonderful Parrot, the Golden Conure or Queen of Bavaria's Parrakeet, *Conurus guarouba*) is a very notable event in the history of aviculture, and Mr. Chapman is to be congratulated on having secured these very rare birds, as it is many years since a specimen was seen in England.

This is a large Conure, and when adult its plumage is of a brilliant golden yellow all over, with the exception of the primary and secondary wing-features, which are of a bright grass-green. The bill and feet are flesh-coloured. The young birds are splashed with green over most of the plumage, and most probably when quite young are almost entirely green.

The Golden Conure has not been represented at the London Zoo since 1880, and the only specimen the writer has seen before these new ones was one in the Jardin d'acclimatation in Paris, in 1900. This species occurs in North-Eastern Brazil, but it appears to be rare in its own country.

Another rare species of which Mr. Chapman recently obtained an example from Abyssinia is the Crowned Starling, *Galeopsar salvadorii*. It is a blackish bird with somewhat glossy plumage and chestnut primaries, a long graduated tail and a peculiar dense patch of bristly feathers on the forehead and fore part of the crown which distinguishes it from all other Starlings. It was named by the late Dr. Bowdler Sharpe in 1891, and formed the subject of a coloured plate in the *Ibis* for that year. This bird is new to aviculture, and we understand that the specimen imported has found its way into Mr. Ezra's aviaries.

Captain Stokes writes:—"My young Nyasa Lovebird hatched about 16th April is growing famously. Only one egg hatched. The nestling is vivid green about the back, and the beak is already fairly bright red; the orange-brick colour of the face is already quite discernible. It is being reared on canary seed, quaker oats, and green food; they touch nothing else."

In a collection of birds recently received by Mr. Chapman from India were some Indian Coursers (*Cursorius coromandelicus*) which, so far as we know, are new to aviculture. Three examples were acquired by the Zoological Society and the remaining two went to Captain Stokes. It is of a rich rufous colour, with a conspicuous white stripe over the eye—a very handsome species. The Zoo is now able to exhibit three species of Courser together in one of the aviaries in the Small Bird House.

With the Coursers came two handsome species of Lapwings—the Red-wattled (*Sarcogrammus indicus*), an apparently new species to aviculture, and the Yellow-wattled (*Lobipluvya malabaricus*), both of which may now be seen in the Diving-bird House at the Zoological Gardens.

REVIEWS

THE MIGRATION OF BIRDS¹

Professor A. Landsborough Thomson has rendered a great service to ornithology in the admirable manner in which he has collected the known facts, and discussed the various problems presented by the migration of birds, in his important volume entitled *Problems of Bird Migration*. It is a subject that has exercised the minds of ornithologists for very many years past, but the problems presented by it are still far from solution. The method of marking birds by means of affixing light aluminium rings to their legs has been most successfully practised in England and on the Continent of Europe, as well as in America, with the result that a large amount of information has been acquired

¹ *Problems of Bird Migration*, by A. Landsborough Thomson, O.B.E., M.A., D.Sc. H. F. and G. Witherby, 326 High Holborn, W.C. 1. Price 18s. net.

of the routes followed and distances covered during the migration flight. Dr. Thomson's book lays before us the facts so far as at present known of the subject, not only as it relates to Great Britain, but to the whole world, and it is certainly one of the most important works on ornithology that has appeared for some time, and we commend it to the careful study of those who would learn of the most obtruse and interesting subject connected with bird-life.

THORBURN'S *BRITISH BIRDS*¹

Our members will be glad to hear of the appearance of the third volume of this very beautifully illustrated work, the first two volumes of which have already been noticed in this journal. The present volume deals with the Geese, Ducks, Pigeons, Sandgrouse, Grouse, Pheasants, Partridges, Rails, Bustards, and Waders, and, like its two predecessors, contains no less than forty-eight coloured plates, which fully maintain the high standard of excellence which one always looks for, and seldom fails to find, in Thorburn's work. We have frequently been asked to recommend a good book on British birds which will enable anyone to identify the various species, and here is such a book with a coloured illustration, admirably executed, of almost every bird, and, moreover, at an extremely moderate price. Thorburn's *British Birds* is certainly the most attractive bird-book that has appeared for a long time, and both author and publisher are to be heartily congratulated on the production of a work that every bird-lover will wish to own.

CORRESPONDENCE

SPECIES NEW TO AVICULTURE

SIR,—Notices of the arrival of species new to aviculture appear so frequently that when writing of those families (Finches, Weavers, and Parrots) which provide the great majority of cage-birds, it will soon, for reasons of space, be necessary to mention only those which

¹ *British Birds*, by Archibald Thorburn, vol. iii. Longmans, Green & Co., 39 Paternoster Row, E. C. 4. Price 16s. net.

are *not* recorded as having been kept in confinement, and for the others refer readers to *Aviculture* (Vol. I of which has just appeared),¹ where our leading authorities deal ably with all species which have hitherto been imported to and kept in Europe. Their articles are fully illustrated with coloured plates, and it is a book which all aviculturists will read and treasure.

As regards the Finches (*Fringillidæ*), the imported species, whose name is legion, appear to belong to about seventy of the hundred odd genera given in the *British Museum Hand-list of Birds*. Are there any records of the keeping of any of the others? These, in the order of the *Hand-list*, are :—

Geospiza and allies, the Galapagos Ground-finches. (I seem to remember reading that Darwin caught some; did any reach Europe?)

Chaunoproctus, Bonon I. Grosbeak.

Perissospiza, a Himalayan Grosbeak.

Loxipasser (Jamaica), *Neorhynchus*, *Piezorhina* and *Dolospingus* (S. America), *Melanospiza* (St. Lucia), *Amaurospiza*, *Caryothraustes* (Central America), *Rhodothraupis* (Mexico), American Grosbeaks.

Callacanthis, a Himalayan, and *Loximitris*, the Haitian Siskin.

Rhodopechys, *Rhynchostruthus*, and *Rhodospiza*, Central Asian and Socotran “Desert Bullfinches”.

Sorella, an Abyssinian Sparrow.

Heliospiza, *Linurgus*, and *Nesospiza*, African Finches.

Pyrhroplectes and *Pyrhrospiza*, Himalayan Rose-finches.

Urocynchramus, a Chinese “Rose-bunting”, and *Tisa*, the Japanese Grey Bunting. These must surely be kept in those countries of bird-keepers.

Centronyx, *Plagiospiza*, *Aimophila*, *Amphispiza*, *Oreospiza*, North American Buntings; *Poospiza*, *Porphyrospiza*, *Melozona*, and *Arremonops* from S. America.

Embernagra and allies from Argentina, etc.

Nesospiza, of Tristan d’Acunha, which one can certainly say has never been imported alive.

Acanthidops, *Haplospiza*, *Schistochlamys*, *Atlapetes*, *Pogonospiza*,

¹ Published by Stephen Austin & Sons, Hertford. Price 15s.

Pselliophorus, and *Pezopetes*, all more or less sparrow-like Buntings from S. and C. America.

Will any reader who can give us any information he has about these ?

E. HOPKINSON.

THE MAGAZINE

The following letter was addressed to the Hon. Secretary :—

MADAM,—On reading the *Avicultural Magazine* for the month of May it was with some astonishment one noticed an article by the Hon. Editor on a letter written by me, as a Member of the Council, to the Avicultural Society, which caused me not a little pang of regret.

The comments were on a portion of a letter, and I hope in fairness to all concerned that this will at least be given equal prominence in the next issue.

(1) Possibly the Hon. Editor is not *au fait* with Council matters, as he was not present at the last meeting of the Council at the Zoo offices. Otherwise he would have known that a further member of the Council commented upon the articles appearing in the Magazines, and he also stated that he ¹ personally had read them before in the French magazines, etc.

(2) The Hon. Editor has mutilated a sentence of mine. This should read exactly as it is written in the first paragraph commented upon, namely, that nearly all the matter has been copied from other journals—or taken from Continental experience, etc. This rather alters the whole case, with which we think he will agree. Consequently, the first sentence in the third paragraph of his comments does not apply.

(3) I would point out that my correspondents are not personal friends of mine—I have, in fact, never had the pleasure of meeting them. Presumably they wrote me as late Hon. Secretary of the Foreign Bird Club and one who was mostly responsible for the amalgamation.

(4) The complaint about copy being scarce is not correct, as the Hon. Secretary informed the Council at the last meeting that we had

¹ The member.

more copy than could be used for months. In fact, never were we so inundated with copy.

(5) The cost of the *Magazine* is not an insuperable problem, as I have shown the way to practically double the *Magazine* at no increased cost.

(6) The writer unfortunately has to travel, and consequently cannot, for obvious reasons, be in touch—only at infrequent intervals—with a hobby of which he is passionately fond.

Possibly the Hon. Editor when he adopted personalities was not aware of this.

(7) One knows just as much as the Hon. Editor the thankless job it is to be a Hon. Officer of a Club or Society, and it is up to all to pull together for the benefit of all the members, particularly where there are a great many novices, and this should be borne in mind by him.

My last sentence quoted in the *Magazine* shows that my letter was not in the nature of a personal complaint.

Lastly, one can do just as much work for a Society and not appear on the surface, and this, I for one, do not mind doing.

(8) The question of plates has nothing to with any officer of the Club but solely the generosity of the donor—whom I am sure all will thank. The bulkiness of a novel is no criterion of the matter contained therein and this, in so far as knowledge for the novice, applies to the *Magazine*.

It is most unfortunate that this matter has been rushed into print—at least personally I think so. My letter was written to the Hon. Secretary on business of the Society, as stated above—with a copy to the President—and it was purely a matter for the Council, and not the members, particularly where only a part of a letter is quoted by him. Why not the preceding paragraph to the one mentioned, when a different complexion is put on the whole subject.

Why must one officer—even though he be the Hon. Editor—endeavour to pillory a member of the Council for bringing forward a matter of public interest before the Council before discussion by the Council.

Put the whole matter to the vote of members, whether they prefer

an article on birds within their reach, that is to say either pocket, conditions, or space, to an article, no matter how well written, on something which they are never likely to acquire. The vote I throw will be for the former, whereas the latter, I contend, has predominated with most of the articles of late.

One hopes that the Hon. Editor will, in future, respect information which is given for the benefit of the Council, before he takes it upon himself to publish matters of a nature such as he has done with regard to myself.

The attack is most uncalled for.

A. E. SNAPE, Major.

[We print the above letter as we do not wish to be considered unfair by Major Snape, but it is necessary to make the following comments :—

Paragraph marked (1)—It is true that the Editor was unavoidably absent at the last Council meeting, but he has no power to withhold the Special Articles, as explained in "Avicultural Notes" of last month.

(2) There was no mutilation of a sentence. The paragraph quoted from Major Snape's letter was printed *word for word* as it appears in the letter referred to.

(4) The only copy of which there is abundance is that of the Special Articles for *Aviculture*, and the Editor would not refer to copy being scarce unless it were so.

(5) Major Snape's suggestion of a way to double the size of the *Magazine* at no extra cost is a matter for the Council to consider, but it may be pointed out that never in the history of the Society has enough copy been received month by month to publish a magazine of double the present size.

(8) Certain plates have been, very generously, presented by members of the Society, the *majority* are, however, paid for from the funds of the Society.

Finally, we would add that the former letter from Major Snape referred to a suggestion as to the production and publication of the *Magazine* which was entirely a matter for the consideration of the

Council, with the exception of the last paragraph, which was stated to be "for the benefit of all concerned" and we deemed it to be our duty to publish it and comment upon it.—EDITOR.]

SIR,—Will you please allow me to say that in my humble opinion the general interest of the *Avicultural Magazine* has never been greater than it is at present, and has been for the last year or two.

Many of us readers enjoy the articles "copied from other journals", and we would be very sorry indeed to see a return to the days when most of the articles referred to beginners, accounts of the attempts at nesting by their Zebra or Cut-throat Finches, or the sad and sudden death of a Bull-finch from over-eating.

PHILIP GOSSE.

SIR,—Seeing a quotation from Major Snape's letter in our *Magazine*, I wish to say I appreciate your work as Hon. Editor. I consider the *Magazine* has never been better with matter that appeals to every one.

I wish we had more letter correspondence, as in the old days.

At the present time, I keep only Budgerigars, and have nothing of general interest to write about.

JOHN W. MARSDEN, F.Z.S.

THE INCORRIGIBLE

SIR,—First of all, let me explain that the above title refers to "A Hen Gouldian Finch". Her husband is beyond reproach, but she—well, the following will show what sort of a lady she is.

Early in November, 1925, she decided to go in for an egg-laying competition. She kicked off by laying seven. The building of a nest was the furthest thought from her mind, though hubby had carried bits of grass, etc., round and sung his microscopical melody until he had to give up in sheer exhaustion. Her ladyship merely deposited the first two eggs on the floor of the cage, which, by the way, is of the large box type. As I could see she was not going to make the nest, I made one myself in a small cress basket, and placed it on the floor of the cage in the corner, putting the two eggs therein. She laid the balance of the clutch in the improvised nest, and sat well, with the exception of one night, on about the seventh day, when she decided that the weather was too warm for sitting; however, she returned the

following morning, and apparently the eggs had not suffered from this undue exposure. She only hatched two, which she fed well for two days, after which she found this was too exerting for her, so spent most of the following day standing on the side of the nest, watching the two unfortunates lying starving in the nest.

In about three weeks' time she again went to nest, this time building her own in a Hartz Mountain cage, but she refused to sit. Ever since this, right up until to-day, she has been fooling about in and out of a cigar-box, and, to tell the truth, I have not worried much about her, as I have given her up as a bad job for this season. However, I decided to-day to clear the nest box out altogether, and find, to my great surprise, that it contained thirty eggs.

I ask you, what do you think of her, and what can I do to make her settle down to home life ?

THOS. L. S. DOOLY.

[In a case like this Bengalese would prove very useful as incubators and foster parents. We believe that they are used extensively for this purpose in Japan.—ED.]

BREEDING RARE PARRAKEETS IN AMERICA

SIR,—I have been trying for some little time to induce American ornithologists and bird-lovers to undertake the systematic breeding in moveable aviaries of those species of Parrakeets which are threatened with extinction in a wild state from causes beyond human control. In my efforts I have been very ably assisted by Mr. Charles Metzger, of 6312 South Ashland Avenue, Chicago, who, though unable to attempt any breeding himself, has been most energetic in collecting information and in trying to obtain support. Some of the facts that have come to light are of no little interest. In the first place, the fact has been established that the climate of parts of California is admirably suited to the experiment, and some of the very birds I am most anxious to save have been bred in considerable numbers, even under conditions of aviary management which are far from ideal. In the second, we have found out that there are at the present time in the hands of certain Californian aviculturists, breeding stocks of Blue-winged or Elegant Grass-parrakeets, Bourkes, and perhaps even Turquoisines. One

Japanese gentleman recently acquired three pairs of Bourkes, and during the course of the year bred seventeen young, although he kept all his birds together—a very risky proceeding in view of the pugnacity of many cock Bourkes, and their naturally solitary habits when nesting. It is even possible that there may be more Bourkes in California at the present time than there are wild in Australia, so exceedingly scarce does this lovely little Parrakeet seem to have become.

Encouraging as I find this unexpected news of rare species breeding well in captivity, there is another side to the picture. At present hardly any of the owners seem to be properly aware of the priceless value of their avian treasures. They are keeping them just anyhow, a number of pairs together, with birds of other species occupying the same aviary, and free to disturb nests if they will. Sometimes, dreadful to relate, rare Grass-parrakeets seem to have been cleared out to make room for the domestic Budgerigar! There appears to be very general ignorance as to what Parrakeets are really rare, i.e. rare in a wild state, and what are a legitimate source of pride to the breeder. Mealy Rosellas may be more prized than Bourkes, because they happen to be temporarily scarce in the American bird market, and a person may be more proud of breeding Indian Ringnecks and Alexandrines than of breeding Blue-winged Grass-parrakeets.

I should like to implore our American members to make the most of their wonderful opportunities before it is too late. If they do not happen to live in California they can perhaps help to finance a preservation experiment in that country. The saving of a rare and beautiful bird from extinction is surely a matter of importance to *all* bird lovers, even though they may never be able to make the species a part of their own collection.

Owners of rare birds need to be discovered and aroused to a sense of the value of what they possess. Arrangements need to be made for the purchase of all surplus stock they are willing to sell for use in breeding under the best conditions to ensure continued stamina and fertility. Mr. Metzger would, I am sure, be delighted to give what help and information he could.

In conclusion, it might be well for me to point out that the Grass-parrakeets of the genus *Neophema*, all of which are in need of preservation, are, in the case of certain species, much alike, and a certain amount

of knowledge is desirable to avoid the mixing of different kinds, and the production of scientifically uninteresting hybrids.

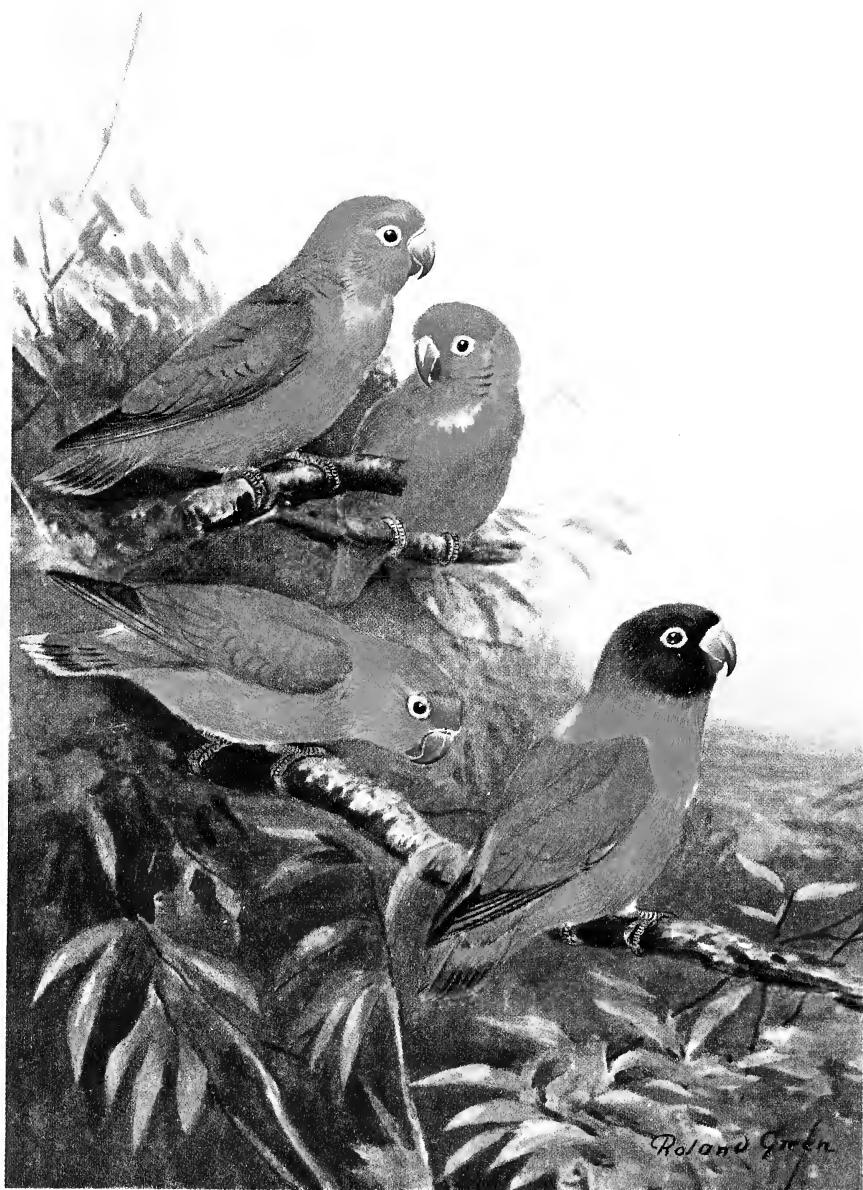
The Blue-winged Grass-parrakeet (*Neophema venusta*) is the commonest, and the one most often imported. It is the only Grass-parrakeet found in Tasmania, Gould's statement that *N. chrysostoma* also occurs there being apparently an error due to the fact that male Bluewings are often "orange-bellied".

The adult male Bluewing has a *broad* band of blue on the wing of a *uniform dark colour*. The Blue-winged Grass-parrakeet is often miscalled "Elegant" by dealers. The true Elegant Grass-parrakeet (*Neophema elegans*) is found on the mainland of Australia. It differs from the Bluewing in the fact that the adult male has a *narrow* band of blue on the wing of *two* colours—pale blue on the edge, dark on the inner side. The Elegant Grass-parrakeet is sometimes miscalled the Orange-bellied by dealers, as adult males often have orange patches on the abdomen, like some Bluewings. The Orange-bellied Grass-parrakeet (*Neophema chrysostoma*) is a very rare bird, also from the Australian mainland. It is the greenest of the grass parakeets, but its distinguishing feature lies in the frontal band which is broad, rather irregular in shape, and of a not very intense blue. Adult male Elegants and Bluewings have the blue band across the forehead narrow, clear cut, and intensely vivid.

The Rock Grass-Parrakeets (*Neophema petrophila*) is the most soberly coloured of the genus. The greater part of the plumage is a brownish olive green, and the blue areas on the wings and forehead are smaller and less vivid than in the other species.

Females of all the above-mentioned species bear a general resemblance to males, but they have less colour on the forehead—practically none at times—and the blue areas on the wings are smaller, duller, and mingled with green feathers. The colour of the belly is also less bright. Young birds in first feather are even greener than hens, and more destitute of frontal bands. They assume adult plumage at an early age, and are in full colour long before they are a year old. The two remaining members of the genus—the Turquoise and the Splendid Grass-parrakeet—are too distinct to need description.

TAVISTOCK.



John Bale, Sons & Danielsson, Ltd

Nyasa Lovebird.
Agapornis lilianæ.

Fischer's Lovebird
A. fischeri.

Masked Lovebird.
A. personata.

THE AVICULTURAL MAGAZINE

BEING THE JOURNAL OF
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FOR THE STUDY OF
FOREIGN & BRITISH BIRDS
IN FREEDOM & CAPTIVITY

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JULY, 1926.

THE BREEDING OF THE NYASA LOVEBIRD

BY CAPTAIN H. S. STOKES

A good deal has been written about *Agapornis lilianæ* since the large consignment arrived a few months ago, so that no further description of it is necessary—and those readers who have not seen it in the flesh will find it faithfully portrayed in the coloured plate.

My first pair were put into a small inner aviary about 4 ft. × 3 ft. × 6 ft. high, along with a lot of blue Budgerigars for lack of other space, and thinking they would like a box to sleep in I put in several Budgerigar nest-boxes. To one of these they took at once, spending most of the day there. After a few days we took advantage of one bird being out to look inside, and to our delight found a neat nest containing six eggs. The nest was made of oak twigs finely shredded up and stems of the flowering grass supplied as green food. I did not at the time see the birds carrying this material, but have since seen them carrying in odd bits of grass and even feathers, always in their beaks, so gather that this is the general means employed, and not, as with some species of *Agapornis*, on the back.

Although they were as good as gold with the blue Budgerigars, I yet thought it wise to give them the flight to themselves and extracted the other occupants as quietly as possible. At this stage of the proceedings I went abroad for a month, and presently heard from my

bird girl that on 16th April, finding both birds off the nest, she looked in and found one egg hatched. The baby grew well and at three weeks had all the brilliant colouring of its parents except that the orange red of the head did not extend as far back as in the old birds. At a month old, 18th May, it came out of the nest fully grown and flying strongly, and made its bow to the world as one of the first—and I hope *the* first, English-bred Nyasa Lovebird.

The other five eggs were afterwards found all to contain dead chicks, which may have been due to both parents having sat together continuously. It is not possible to say how long incubation took. Parents and young retire every night to the nest, where they are cooking a second clutch of eggs! Meanwhile a second pair and a half came from Miss Chapman, of Birmingham, who is very clever at sexing birds and pronounced them to be a cock and two hens. I suppose I am particularly stupid about this, but to this day they look as much alike to me as three pins, and I am quite unable to distinguish them. A small outdoor aviary, unheated, but with cosy bedroom quarters, was prepared for them, and I gave the bird girl orders to listen in for a good wireless weather report (a new found blessing to aviculturists), and to put them out when a warm day was promised. This fortunately came at Easter, just after I had left England. We betted on the supposition that they would go to nest at once and get their eggs laid in the warmth and so escape egg-binding, and this actually happened.

One hen laid, lining the nest just as the other one had done, but in this case the cock did not sit with her, but spent the day with the odd hen.

A few days after my return I was thrilled to find three young hatched, all of which are growing strongly. In both cases the food supplied was merely canary-seed and white millet, green food, and a little insectivorous food, though it is doubtful if they do more than scatter this last on the floor.

The species seems very hardy, not particularly destructive, and above all tractable in disposition. As we have at last a good importation of a new species with all these good qualities, and which seems to breed like a rabbit anywhere and at any time, let us take good care and waste no opportunity to perpetuate it in our aviaries, and keep up

a healthy stock by means of change of blood. It appears to be a very local species, confined apparently to an area of a few square miles, and Mr. Chapman's collector who happened across them said it was an awful journey down to the coast, so we may not get any more for years to come.

[Reports have come to hand of others being successful in breeding this Lovebird, but whether anyone can produce an earlier record than the above we do not know. At any rate, we should be glad to publish accounts from any other members who have bred the species so that our knowledge of its nesting habits may be as complete as possible. The accompanying coloured plate illustrates two additional very beautiful species of *Agapornis* from Tanganyika, for an account of which see Vol. III (Fourth Series), page 154.—ED.]

THE BROWN-NECKED PARROT

By DR. E. HOPKINSON, C.M.G., D.S.O.

Three "Bambara Jobo" (one old and two young) form part of my present bird-family out here in Gambia, and I hope to get them home shortly, as they are all in robust health, as they ought to be from the forefather's name, though as a general rule in captivity they are not.

According to Sclater's *Systema Avium Aethiopicarum*, their scientific name is *Poicephalus robustus fuscicollis* (Kuhl), and for an English one "Gambia Brown-necked Parrot" indicates their restricted range, which is given as "Gambia and Portuguese Guinea". In the Gambia itself, too, they are distinctly local, at any rate during the breeding season, for then they are practically confined to the middle hundred miles of the river, where the mangroves reach their tallest. They nest in holes in these water-side trees and on their fruit the young seem to be fed almost entirely, though when older they eat many other things and are particularly fond of ground-nuts and great pillagers of the heaps in which these are piled to dry after pulling.

This restricted natural diet is, I expect, the main reason why young "Bambaras" are usually so short-lived in captivity—at least that with but few exceptions has been my experience, though old ones live well enough out here, but, as far as I know, the three years one once lived

in the Zoo is about the longest life one has had at home. I hope these will falsify this belief, for although the old one firmly refuses to eat anything but ground-nuts, the young are willing to try anything, and are eating plenty of rice, bread, biscuit, etc., as well as nuts, which is always a good sign.

The old bird, which is intended for our indefatigable Secretary, to be tamed as an example of what can be done in that line, is so far chiefly distinguished for its history and the means by which it became my property. This involves three parties: (1) a wicked old strong-headed Parrot (i.e., this bird), which had had the run for a long time of a native yard; (2) a careless Joloff mother; (3) her enterprising but only toddling Joloff baby boy. One day a month or two ago No. 2 arrived carrying No. 3 in her arms, and No. 1 in a piece of sacking; the former was yelling and weeping (quite naturally as the next proceeding showed), and the latter adding to the din most successfully. The baby was deposited on the ground and the sacking shaken open; out came a much dishevelled shrieking Bambara and a small blood-stained package, which the mother carefully opened and picking up the baby almost put the whole into my arms. I then realized the state of affairs. The poor baby was minus the end of one thumb, and the small parcel was this thumb, which I was expected to immediately and successfully replant in its place. So much for a long and widespread medical reputation out here. Of course, I could do nothing more than put a little dressing on the injured hand and produce lumps of sugar to stop the crying, which they did at once, and send the mother away after a lecture on her lack of proper motherly care and especially in leaving an old Parrot and a young black baby loose in the same hut together. The biter and the thumb were left with me, the latter by accident (only discovered later), the former in return for two shillings of our best present-day brass coinage, to save the bird from the rightly angered parent, who then departed, disappointed as to her main hope, but at any rate with a comforted and temporarily quiescent infant.

The main interest to me in the two young birds is that they are certainly the *rubricapillus* of Forbes and Robinson. As soon as I began to know these Parrots and get specimens at different ages, I felt almost certain that *rubricapillus* was merely a juvenile stage of *fuscicollis*.

Others I have had confirmed this belief, and now these two (a pair I believe) make me absolutely sure.

The adult is a thick-set bird with a big strong beak, whose general body-colour is a dullish green, brighter below, with small red (something between scarlet and brick-red) shoulder-patches, anklet rings and forehead, while the rest of the head is grey tinged with reddish in some examples, and sharply defined at the neck from the green of the body. In the young the green is rather brighter and lighter and the whole head is pink (*not* red) and as sharply defined at the neck as is the grey of the adult. There are no red shoulder-patches or anklets, though one of these two has a suggestion of pink round the ankles (the male I presume), and the head colour, which is much more pink than red, is darkest on the crown and paler in front and at the sides. It is a colour most difficult to describe (vulgarly I think of it as "grog-blossom nose-colour"), and owing to its shade and the peculiar lie of the feathers, it looks at a little distance more like bare engorged pink flesh (like a Vulture's or Turkey-cock's) than plumage. Altogether a young bird looks most certainly quite a different thing to its parents, for besides the clear cut between the pink head and green body, the beak of the young is distinctly smaller and less formidable as a weapon.

This juvenile colour is gradually replaced by that of the adult. When the young leave the nest the pink head is paler and a cleaner looking pink, which gradually deepens into that described above; this in time changes into grey by feather-growth, for these have grey bases from the first, which gradually extend, the ends being worn away (I suppose), till the grey feathers with only pink tips cover the whole head, and the whole looks grey tinged with pink. After the moult all the new head-feathers apparently are entirely grey with just a suspicion of reddish except on the forehead, which is a bright scarlet red, like the shoulder-patches and anklets.

These two young ones are perfectly tame and delight in being handled and in human company, though they keep up a sort of complaining whine nearly all the time, but the old one, although he will tolerate humans within about a yard of him and other birds within about ten yards, is still pretty wild. The two young ones he merely notices to bite, and one which foolishly entered his cage, of which he

is quite fond, nearly ended its days there from the owner's beak. However, usually he is quiet, but when he does scream, it is a scream and a lasting one, which nothing but the utterer's fatigue can stop.

BIRD PICTURES AT THE ACADEMY

By E. MAUD KNOBEL

Aviculturists visiting the Academy should make a point of seeing Room No. VIII, where they will find a number of pictures of birds, some representing species apparently *entirely new* to ornithology. First we come to the "Man with the Macaw". In his right hand he is holding up a slice of melon on which is perched a green Budgerigar (I suppose this is too insignificant a thing to count in the title) and in his left hand he holds a blue and yellow Macaw with a very thin neck and particularly brilliant plumage.

The next picture is perhaps the most fascinating of all, "The Bird Shop". How many of us know the lure of a bird shop? We approach it with palpitating heart and a joyful expectancy, hoping to find something entirely new and wonderful that we are hoping to be the happy possessor of. How often we leave with a feeling of disappointment or anxiety as to whether the new possession is *quite* what we expected or whether it is going to condescend to live with us. In this bird shop there is something to suit all tastes: cages of canaries, pigeons, a cockatoo or two, and endless green love-birds (species unknown) which hang in rows. On the left of the door hangs a green parrot about the size of an Amazon, with a blue head and yellow breast, guaranteed never to have been imported before!

Near this picture is another entitled "Fine Feathers". Here we have two Macaws, the blue and yellow and the red and blue, but these are so surrounded by flowers that it is not until one looks closer that one discovers a Sulphur-Crested Cockatoo hanging in mid-air, and on looking still further a rather washed-out Leadbeater Cockatoo in the background. As a pendant to this picture is another by the same artist entitled "Sanctuary". In this there is a group of Turkeys and Chickens, also so surrounded with foliage and fern that it is hard to find them, but as it is their sanctuary perhaps one is not meant to.

At right angles to this we come to "St. John in Patmos". He is depicted as a monk holding a white feather in his hand and on his left shoulder sits an enormous Eagle with white shoulders ; they do not look a very happy pair. As a contrast to this we next come to "Reflections". Here there is a river with a swan sailing majestically down in the foreground and a few ducks near by. On the left is a grassy lawn on which further away are more ducks, quite a peaceful scene.

And lastly we find "Rima" kneeling on very green grass surrounded with exotic flowers on which various species of Humming-birds are hovering. A snake is stretched out in front of her, and in her right hand she holds up a "Roseate Cockatoo". I always had an idea that Rima came from South America, but perhaps this one lived in Australia ; anyway, one turns away with a feeling of uncertainty as to how exactly she and the Cockatoo came to meet.

A TRIP TO NEW ZEALAND

By JOSEPH APPLEBY

This being my second trip to New Zealand in five years, I had more time to observe the bird life than on the first visit, and I was fortunate in the fact that my daughter's home is right back in the thick bush of the King Country on the Wanganui River, and we were staying with her during the breeding season, November and December. This gave me every opportunity of studying the birds, native and imported.

While on board the *Rotorua*, about 400 miles east of the West Indies, a Frigate Petrel, evidently disturbed by the ship, flew on board at night and, hitting some netting, fell at my feet. He was stunned but not much the worse, so I put him in a box for the night, releasing him next morning, when he sailed away quite strong and happy. He showed no alarm at being handled ; standing on my open palm bowing, as these birds do, before taking flight. Singularly, another Frigate Petrel came on board in the same way in the Indian Ocean on the way home and was treated similarly.

At Curacoa the graceful Frigate Bird, looking like a gigantic swallow, swept round our ship while taking in oil. I never saw him settle on the water or eat anything, and from what I gather, few people ever

have done so. Between Curacoa and Panama several Martins came on board in the evening ; migrants from North to South America. They are different to our Martins, having the red throat like our Swallow, but not the Swallow tail, and the general colour is more purple than dark blue-black. An Osprey or some kind of fish Hawk followed us one day in the Carribean Sea, perching on the gaff on the mizzen mast, off and on giving me quite a good view. I was glad to see that the Little White Heron is made quite a pet of in Panama, and is quite numerous on the road to Old Panama. Four I saw in the portico of the President's Palace looked charming in their rather Moorish surroundings of palm and pools and marble and mosaic floor. There were large flocks of "Jack Snipe" so-called, feeding on the shore of Old Panama Bay. I watched far off, to identify them, and I fancy they were Sandpipers ; there were also numerous flocks of Geese. The great clumsy Buzzard, like a large owl in flight, was very much in evidence. The next bird of interest was the Boatswain Bird, a white gull of which the male bird has two long thin tail feathers, bright red in colour, unfortunately much prized by Pitcairn Islanders for sale to people on ships calling there ; hence the destruction of a beautiful bird for two feathers.

The native birds of New Zealand are becoming scarcer every year owing to the felling of bush and the cultivation of land, but in the bush where the growth is so dense that one cannot leave the track without the aid of a slasher, they are plentiful and happy.

To wake up at 4 a.m. of a spring morning and hear the chorus of song from Tui, Bell Bird, Thrushes, Blackbirds, and numerous others was something to be remembered for the rest of one's days. The Kiwi we hear as we do the Corncrake at home, in the evening after sunset, but I never saw one ; they are mostly nocturnal in habit and like dense bush where none can follow. I read the article on Keas in the May number with interest. I never saw a Kaka Parrot, and they are now very rare even in the North Auckland district, which with the North-Eastern Hawke Bay district were the chief stations. By the way, the pronunciation of Kaka is "Cawcaw". *Nestor notabilis*, the Kea, though much persecuted, is still to be seen plentifully down at Waiho in Southwestland near Franz Joseph Glacier. The Brothers Graham, who are great mountaineers and run the hotel at Waiho, are also great

lovers of the natural, and are doing their bit to protect the birds around them. At any rate, I saw and heard quite a number of them, and most amusing and interesting birds they are. One day, watching half a dozen feeding in the paddock opposite the hotel, much as Starlings do, one suddenly found a toothsome morsel and began calling "Kea-kea-kea", and dancing round in great excitement. The others, some little distance away, immediately began to hop and flop to it, when commenced a regular football scrum. The owner of the titbit threw himself on his back on it, and with his claws kept the others off; the row and the antics for a minute or two afforded the most intense amusement. Another time one showed great interest in the contents of a bottle that was standing upright under a shed. It walked all round and then managed to climb up and look down the neck without knocking it down. I never saw one in captivity, but I am sure they would make the most entertaining pets. I think the birds that interested me most were the Fantails, very like our Longtailed Tit in shape, but larger and dressed in black and white. They are very tame and inquisitive little fellows coming close up and spreading their tails like small Peacocks and flirting them from side to side while inspecting you with sharp black eye and emitting sharp little cheeps the while. They are very numerous in the bush and, being fly-catchers, are of great service to mankind in that "fly-ridden country".

There are no Swifts, Swallows, or Martins in New Zealand, consequently flies of all sorts are a plague; though there are numbers of fly-eating birds in the bush there are few in the open country.

Of British birds I fancy the Starling, Blackbird, and Thrush predominate in this order numerically, then Goldfinches, Greenfinches, Yellowhammers, and, of course, the House Sparrow. The Goldies have a great time, for I never saw thistle seed more plentiful than in all parts of New Zealand.

I fancy the earlier importers of British Birds knew as little about their habits as they did about rabbits; consequently they introduced birds that were best left out. It is a pity they cannot get a few Blue Tits imported to clean the European trees of some of the blight (scaly) which is killing them wholesale, more particularly the Oak.

My return home was via Sydney, and while there for a week I visited

the Zoo. It is the most admirably situated Zoological Gardens, and the various animals, birds, and reptiles looked in excellent condition and in most natural surroundings. Practically no indoor keeping, but all on the lines of the Stellingen Zoo. The aviaries only have slight shelter from southerly winds. Of course, they have a climate there, not winter and July like ours. The Parrots, Parrakeets, and Cranes made one's mouth water, they all looked so happy and well, and then to see dozens of pairs of small birds like Gouldian Finches in perfect health in the open, when we have difficulty in keeping one pair in health, made one long for a little more sun at home.

CONURES AND THEIR ALLIES

By J. DELACOUR and J. BERLIOZ

The Parrakeets which we are now going to describe are part of the same group as includes the Macaws (*Conurinae*).

They differ from them chiefly in being smaller, having weaker beaks and feathered cheeks. They are usually very abundant in their native countries and look very handsome when flying in flocks, as is their habit.

Conures are easily kept and bred in confinement. When acclimatized they can winter out of doors, and the ordinary Parrot aviaries suit them perfectly. The trouble is that they scream and destroy the woodwork of their houses, consequently they are not very attractive in confinement.

The majority will live long in cages, become domesticated and very amusing companions, learning to talk or whistle. Their intelligence is certainly of a high order. They should have a mixture of seeds, millet, canary and hemp, to which may be added sunflowers, oats, and monkey nuts for the larger kinds, also green stuff and fruit. They stay fairly well if they are allowed their liberty, particularly unpaired birds.

Some species have bred in captivity, for instance : *Conurus nenday*, *C. æruginosus*, *C. jendaya*, *C. solstitialis*, *C. aureus*, *Conuropsis carolinensis*, *Pyrrhura leucotis*, *P. chiripepe*, and *P. lucida*, *Myopsittacus monachus*, *Psittacula passerina*, *Brotoperys tirica*, and *B. jugularis*.

American Parrakeets are on the whole less attractive to aviculturists than their relations in Australia. Green in all shades is their chief and rather uniform hue, enlivened sometimes with very bright red and yellow. But the elegance of their shapes, though not to be compared with the Australian species, their liveliness, their brilliant and shining plumage suffice to make them very desirable cage and aviary birds.

American Parrakeets are medium sized and small, and have feathered faces, except round the eyes in some kinds ; and usually long tails. But some much shorter-tailed species are included in this group, which remind one of the short-tailed Parrots.

The species of the genus *Conurus* are typical of the whole family. About thirty are known, and many of them have been kept in confinement in Europe. Their characteristic is a long tail and wings in which the fourth flight feather is sharply attenuated at the tip, and by their short beaks, having the cere partly bare, leaving the nostrils exposed. They are divided into several easily distinguishable groups according to the colour of their rectrices.

(a) *Yellow rectrices*. This characteristic applies only to the Golden Conure (*C. guarouba*), which is very different from all the others in its bright yellow colouring, the wings only being dull green. This is a large species measuring 14 inches in length. It inhabits North-East Brazil, and is unfortunately rarely to be seen in our aviaries. It is the handsomest of the group.

(b) *Rectrices green above, blackish underneath*. Several species of this group resemble the preceding in that their predominating colour is yellow and their beaks are blackish. Such is *C. solstitialis* from Guiana and the Amazon ; it is smaller than the last, and its plumage is a fine yellow deeply tinged with orange ; its wings and tail are green shading into blue.

The JENDAYE CONURE (*C. jendaya*) is better known in captivity, it differs from the above in having a green back, the rest of its plumage is bright yellow deepening to orange red on the face and abdomen ; its wings are largely blue. It inhabits the Eastern provinces of Brazil together with another nearly related species (*C. auricapillus*), in which the green of the upper parts extends to the occiput and the cheeks,

so that only the front face and the vertex are yellow like the under parts, with lores and round the eyes red.

Let us also mention in this group the BLACK-HEADED CONURE (*C. nenday*) which has about the same size (roughly 12 inches) and general appearance. It may easily be recognized among its relations by the brownish mask which covers the face and the top of the head to the nape; the rest is entirely green shading into bluish, and becoming yellowish on the breast and abdomen. The feathers on the thighs are bright red and the wings blue in parts. This species, which is often met with in confinement, comes originally from Paraguay and the surrounding country.

(c) *Retrices* green above, olivaceous golden green beneath. This group is by far the richest in species, and these may themselves be divided into two types of differing coloration.

One is characterized by the whitish beak and uniformly green plumage, only relieved by red markings on the head, the fold of the wings and the feet. This red colour only appears quite late in the development of the bird, and so only adults of these closely related forms can be identified with any certainty.

One of the best known of this group is the RED-HEADED CONURE (*C. rubrolarvatus*) from Peru and Ecuador, about the same size as the Black-headed Conure, it may be known by its red plumage; which, in adults, extends over the forehead, cheeks, round the eyes, the fold of the wings, and the feathers under the wings, and on the thigh feathers.

C. mitratus strongly resembles it, but is decidedly larger and is only red on the head and a few scattered feathers on the body; it is a native of Bolivia and the North of the Argentine.

We may also mention in this same group *C. wagleri* from Colombia and *C. finschi* from Costa Rica.

Other species, allied to the preceding, may be known by having no red on the forehead; such are the CUBAN CONURE (*C. euops*), the GREEN CONURE (*C. leucophthalmus*), which may be known by its large yellow under wing feathers, and the PORTO RICO CONURE (*C. maugeti*) belonging to the island of Mona near Porto Rico. We can only name this from memory as it has only once been brought to our notice in captivity

in Europe. Lastly, the Mexican Conure (*C. holochlorus*) has no red at all in its plumage, which is entirely green even when adult.

Another type of colouring in this same group of Parrakeets is distinctive owing to the absence of red in the plumage and by having the wings more or less blue; in addition the beak is brownish, rarely light coloured.

The smallest species of this genus belong to this category, among them *C. aztec*, which does not exceed $9\frac{1}{2}$ inches in length. It is a native of Mexico and Central America; its plumage is green, changing to yellowish on the abdomen with the throat and breast olive brown and the flights partly blue.

C. nanus from Jamaica is a little larger than the above, otherwise it differs only by its pale beak and browner throat and breast.

The CACTUS CONURE (*C. cactorum*) is very common in Brazil. It is the same size as *C. nanus* but its green plumage is enlivened by the orange yellow of the breast and abdomen, and its eyes are surrounded by a circle of yellow feathers. This same circle is a characteristic of two neighbouring species, *C. æruginosus* from Venezuela and Guiana, and *C. pertinax* from St. Thomas' Isle, and Santa Cruz, the last named is easily recognizable by its orange yellow face.

Lastly this group contains two species which are remarkable in having a large orange frontal spot: they are PETZ'S CONURE (*C. canicularis*) from Mexico and Central America, a small species, and the GOLD-CROWNED CONURE (*C. aureus*) from Brazil, which is without doubt the most frequently seen in captivity of all the Conures. Its plumage is green above with bluish vertex, below the body is olive, becoming greenish on the abdomen; finally, as in all this group of birds, the wings and tail have blue markings.

(d) Green *rectrices*, the laterals marked reddish brown at the base of their inner portions.

This last group of Conures only includes two species, the SHARP-TAILED CONURE (*C. acuticaudus*), which is the most common and inhabits Bolivia, Paraguay, and the North of the Argentine. It is a fairly large bird with uniformly dull green plumage, the face and crown of the head blue. The beak has the upper mandible whitish, the lower brown. The BLUE-CROWNED CONURE (*C. hcmorrhous*) from Brazil is rarer;

it can only be distinguished from the preceding by its brighter green hue and the forehead and vertex alone being blue, and by its beak being altogether pale.

The genus *Conuropsis* likewise near to the true Conures is represented by the only Parrakeet of North America (*C. carolinensis*), a bird which presents a special interest at the present time, but of a retrospective kind. It was supposed to have become extinct about twenty years ago owing to the severe persecution it underwent. Formerly very abundant in the Southern United States, where it pillaged the crops, it may perhaps still exist, but only a few individuals in the lonely districts on the Gulf of Mexico.

This bird is about the same size as the yellow-headed Conure; its plumage is elegant, green beneath, with the fold of the wing, head and nape yellow, and orange face. At one time it was very common in the aviaries of amateurs, but can now be seen only in museums, where it is fairly common, for it is, with the Passenger Pigeon of America, one of the most recently extinct birds of our day.

The species belonging to the genus *Cyanolyseus* are the largest of all the Conures, and thus approach the Macaws. Only two species are known, very much alike in their plumage. The best known in confinement is the LESSER PATAGONIAN CONURE (*C. patagonus*), which attains a length of about $17\frac{1}{2}$ inches. Its colouring is somewhat dull, but varies considerably, and thus reminds us that this bird deprived of the brilliant colours of its relations, originated in a temperate climate. It inhabits the Argentine and Patagonia. Its hue is olive brown with greyish brown throat and breast; the lower part of the back, rump, upper tail-coverts, and sides, yellow; the middle of the abdomen and the tibiæ orange red. Round the top of the breast is a whitish badly defined band, often interrupted in the middle. The wings are greenish with the primaries and their coverts dull blue; the tail is bluish green.

C. byroni from Chili only differs in being yet larger, its total length being 20 inches. It is very rare in confinement.

Another Chilian Parrakeet also rare in our aviaries is the SLIGHT-BILLED PARRAKEET (*Henicognathus leptorhynchus*), the only species of its genus, and distinguished from all other Conures by its exceptional

beak, the upper mandible of which has the culmen almost straight, and is prolonged in front to a sharp point. Its size is that of the larger Conures, but the general colouring of its plumage more closely resembles that of the Parrakeets of the genus *Pyrrhura*. It is dull green with a grey edging to each feather, particularly clear on the head; the forehead and lores brownish red, likewise a rather indistinct mark towards the centre of the abdomen. Its wings are green, shot with blue, and the tail is entirely red with a greenish tip; the beak is black.

The genus *Microsittaca* also contains only one species, *M. ferrugineus*, known as the Chilian Conure, very much like the above in its plumage, but smaller and with a normal beak like that of the *Pyrrhura*. It is decidedly the most southern of all Parrots still living, since it is to be found from Chili to the Straits of Magellan.

The Conures of the genus *Pyrrhura* are the most typical representatives of the group of American Parrots. They have bare beaks and nostrils, a characteristic which distinguishes them from all the other types previously described, which always have those parts more or less hidden in feathers.

Nevertheless the birds of the genus *Pyrrhura* differ from *Conurus* in that the fourth flight feather is of the normal shape as well as by different colouring in more elaborate and elegant patterns, especially in the rectrices being almost invariably a rather coppery red-brown, at least on the underside. They are comparatively small birds; a large number of species are known but they are not so frequently met with in captivity as the true Conures and up to the present only a small number have been imported. They are hardy and easily bred, and are far prettier and more pleasing than the typical Conures.

The RED-EARED CONURE (*P. cruentata*), a native of South-East Brazil, is one of the largest species of the genus, yet it scarcely attains 12 inches in length. Its plumage is very variegated if not particularly brilliant: green, with brown-black head, each feather narrowly edged with ochre yellow, the forehead and lores brown-red, the throat and cervical collar blue. The sides of the neck have an orange spot; the lower back and middle of the abdomen also each have a large spot of dark red; the fold of the wing is red, the rest green, shaded blue; the rectrices, coppery brown, are strongly olivaceous above.

The RED-BELLIED CONURE (*P. vittata*) is also a native of Brazil and Paraguay. It is smaller than the above, and has much the same colouring, but differs in having transverse bands of grey and yellowish, which are conspicuous on the olivaceous ground of the throat and breast. Besides this the head is entirely green, save for a narrow frontal stripe of chestnut red, and the fold of the wing is green. This same colour scheme, characterized by undulation on the breast, which are due to the edging of feathers either paler or darker, is found in most of the other *Pyrrhura*.

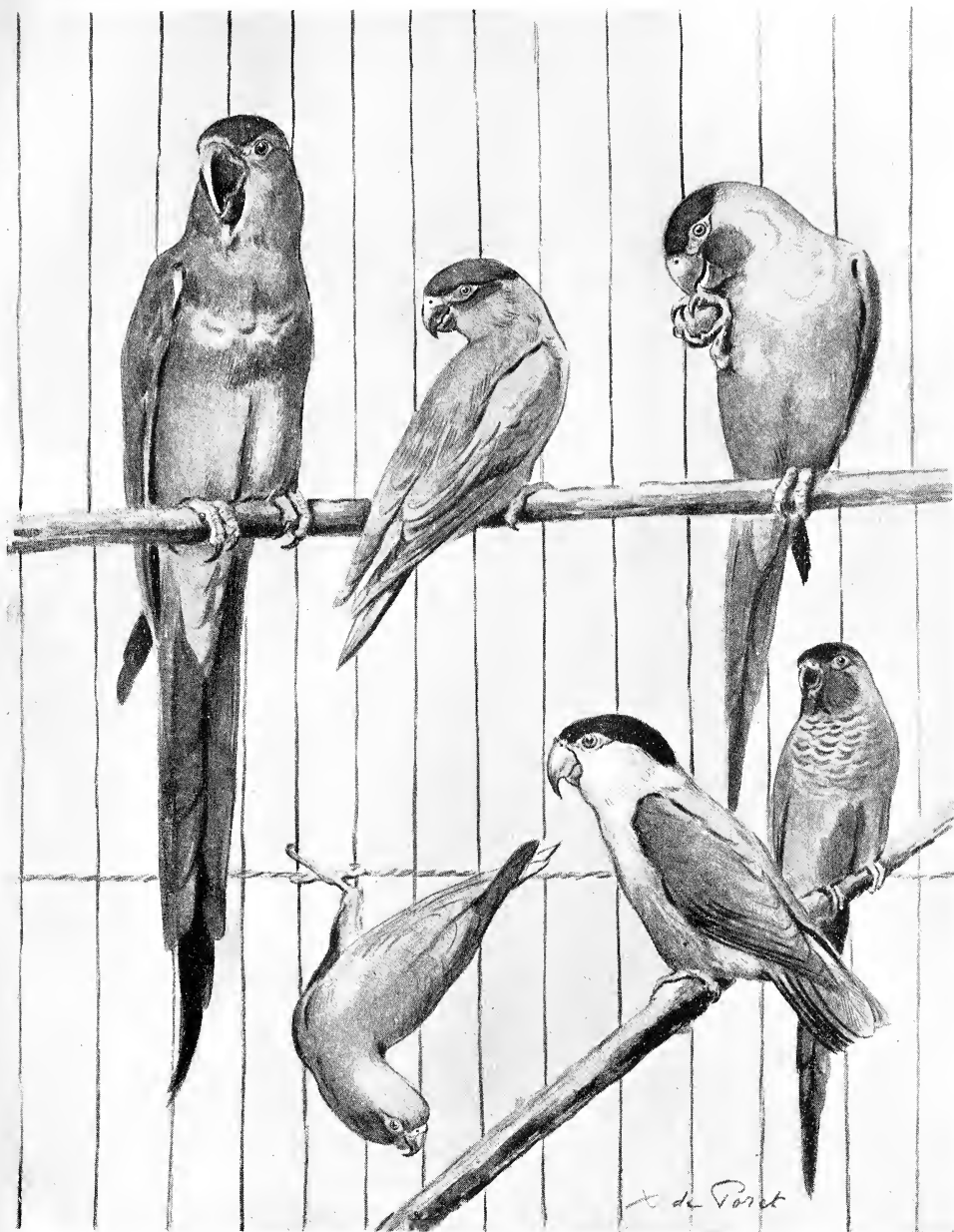
The WHITE-EARED CONURE (*P. leucotis*) is certainly the most widely known in confinement, for all that it is in reality becoming scarcer and scarcer. A native of Eastern Brazil, it is remarkable by its small size which does not exceed $8\frac{1}{2}$ inches. In its colouring it resembles *P. vittata*, but is distinguished by having the top of the head brown-black, the cheeks chestnut red like the forehead, and the region round the ears dirty white; also by the red fold of the wing.

In *P. picta* from Guiana and Trinidad the light grey edges of the throat and breast feathers show up clearly on the brown black ground of the first and the olivaceous hue of the second, which gives a scaly appearance to this portion of its plumage. The top of the head is black, the forehead blue, and the auricular region grey. The plumage otherwise is like that of *P. leucotis*, but it is a slightly larger bird. It is very rarely seen in confinement, whereas LUCIAN'S CONURE (*P. luciani*), a very near ally, which differs only in having when adult the forehead, vertex, and cheeks red, is common in captivity and easily reared.

The other species of this genus have no red dorsal spot. *P. perlata* from the Lower Amazon is almost the only member of the group which has been recorded in confinement. It is green, with frontal band, cervical collar, cheeks, sides, and under tail feathers bluish, the vertex brown, throat and breast brown with paler or blackish edging to the feathers; the abdomen having a reddish mark; the fold of the wing and under wings red, the tail coppery brown.

AZARA'S CONURE (*P. chiripepe*), very closely related to the above has lately been imported and bred in confinement.

Some fine species contained in this group and unknown to aviary keepers, may be mentioned; they are remarkable for the fact that



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Patagonian Conure,
(*Cyanolyseus patagonicus*).

Red-capped Parrot,
(*Pionopsittacus pileatus*).

Tovi Parrakeet,
(*Brotogerys jugularis*).

Black-headed Caique
(*Caica melanocephala*).

Red-headed Conure,
(*Conurus rubrolarvatus*).

White-eared Conure,
(*Pyrrhura leucotis*).

their great wing coverts form a bright-hued speculum: such are *P. calliptera* from Columbia which has a bright yellow speculum tinged with red, and *P. souancei* from Ecuador with red speculum.

Of the two species of the genus *Myopsittacus* only the QUAKER PARRAKEET (*M. monachus*) is known to aviculture, but of all the Parrots which we have described, it is the most frequently caged. Originally from the subtropical parts of South America, Uruguay, Bolivia, and North Argentine, it can the more easily endure our climate. Its colouring is very distinct; although not bright it is sufficiently elegant owing to the contrast between its grey face, throat, and breast, each feather edged with paler grey, and the green of the rest becoming slightly yellowish on the flanks; its flights are blue and the beak whitish. It is about the same size as the BLACK-HEADED CONURE (*C. nenday*), but is stouter, and notwithstanding its somewhat quarrelsome nature, is a much-appreciated cage bird. Unlike all other Parrots, it builds a purse-shaped nest of twigs.

The three genera of which we still have to speak contain much smaller birds than those described above. Some are the smallest Parrakeets yet known. They have, like *Pyrrhura*, and unlike *Myopsittacus*, the cere bare and the nostrils uncovered.

The shape of the beak, which is slender and laterally slightly compressed, recall the *Brotoperys*, of which about a dozen species are known and have almost all been imported into Europe. With some the tail is longer than the wings, as among the most typical Parrakeets, which they resemble also in their general appearance. The ALL-GREEN PARRAKEET (*B. tirica*) is the giant of the race, although its extreme length is but 10 inches; it has uniformly green plumage, paler and somewhat yellowish on the face and upper parts of the body, with blue flights; it is a native of Eastern Brazil. The ORANGE-WINGED PARRAKEET (*B. chiriri*) from South-East Brazil and Bolivia is slightly smaller than the preceding and adorned with a yellow patch on the wings. The YELLOW-WINGED PARRAKEET (*B. virescens*) from the Upper Amazon is a pretty, small species, with bluish face, and wings which have, besides the yellow patch of the coverts, the primary inner flights and the secondaries yellowish white, which contrast with the blue outer flights.

The other species have considerably shorter but equally cuneiform tails. In this group we may mention :—

The ORANGE-FLANKED PARRAKEET (*B. pyrrhopterus*) from Ecuador and Peru, which owes its name to the bright orange underwing feathers which enliven the otherwise uniform green of its plumage.

The TOVI PARRAKEET (*B. jugularis*) is common throughout Colombia and Central America and characterized by the yellow under wing-coverts and the olive brown upper wing-coverts, contrasting with the generally green or bluish plumage, and by a little orange spot under the chin ; this last characteristic does not exist in the variety *apurensis* recently discovered in Venezuela by M. Delacour and brought back alive to Europe by him.

The GOLDEN-FRONTED PARRAKEET (*B. tuipara*) from the region of the Lower Amazon, is adorned with an orange frontal band and spot under the chin, also a small speculum of the same colour on the wings.

The GOLDEN-WINGED PARRAKEET (*B. chrysopterus*) is a small species scarcely 7 inches in length, resembling the preceding, and having like it a whitish beak, but the chin and forehead brown. It inhabits Guiana and Venezuela.

Lastly the TUI PARRAKEET (*B. tui*) from the Upper Amazon of the same size as the former and resembling it in its plumage, except that it has a brown beak and no orange speculum on the wings : on the other hand its sinciput is yellow and the sides of its head sometimes ornamented with a post-ocular streak of the same colour.

The birds of the genus *Bolborhynchus*, less numerous than *Brotogeris*, are distinguished by having the beak, and especially the cere, slightly swollen laterally. They have the massive look of the Short-tailed Parrots, except *B. aymara*, which has the tail as long as the wings. This bird is green, bluish on the wings and tail, head brown fading to pale grey on the sides as well as on the throat and breast. It inhabits the Andes of Bolivia, Argentine, and Chili.

B. aurifrons is considerably smaller and confined to Peru ; the male is green with bluish flights, face and throat yellow, also the middle of the breast and sides. The female is uniformly green.

The LINEOLATED PARRAKEET (*B. lineolatus*), the only species which is common in confinement, comes from Mexico and Central America ;

it differs considerably in plumage from its congeners. Dull green with face and under parts of the body yellowish, it is ornamented on the back and sides by black transversal stripes which become spots on the uropygium and wing and tail-coverts, the quills being black edged with green.

The last type of Parrot which we have to describe belongs to the genus *Psittacula* and are known as Parrotlets. It contains the smallest of all the American Parrakeets. They are not more than 5 inches in length and are veritable pigmies among the Psittaciformes. In appearance they are like African Lovebirds (*Agapornis*), with which they are often confounded by amateurs and dealers.

The PASSERINE PARROTLET (*P. passerina*) is a common little bird in Brazil, and fairly so in confinement. The male is a fine green, having the face and under parts of the body slightly yellowish, emerald green round the eyes; the uropygium and lower back deep sea blue, also the secondaries and wing-coverts; the short rounded tail is green, the beak whitish. The female has no blue at all in her colouring, and differs considerably from the male.

This bird is susceptible to cold when first brought over, but once acclimatized it is very hardy and can stand bad weather well, provided that it is protected from wind and damp. These Passerine Parrakeets are fairly peaceable with other birds, but frequently attack one another when in high condition, often with fatal results, so that two pairs should not be kept together. They go to nest readily in an aviary, but the eggs are often clear. They will live in a cage, but it is cruel to keep them shut up for long together.

They should be given hemp, canary, and millet, soaked bread and greenstuff.

The Parrotlets do well at liberty where owls are not too numerous, but as the young are very susceptible to cold it is wise to catch them up before the second brood.

The BLUE-RUMPED PARROTLET (*P. cyanopygia*) from West Mexico differs from the above in that the blue parts are turquoise.

The GUIANA PARROTLET (*P. guianensis*), extending from Columbia to Guiana and in the Lower Amazon region, is almost entirely green. The male has only the innermost wing-coverts above and

below blue, the female is distinguished by the complete absence of this colour.

With the *Psittacula*, a closely related type of true Parrakeets, notwithstanding differences of appearance, we bring this rapid review of the New World species of Parrakeets which have been kept alive in confinement in Europe, to an end.

AVICULTURAL NOTES

By THE EDITOR

The arrival in London of a large consignment of Black-cheeked Lovebirds is an important avicultural event, as the species appears to have been imported only once before and that in 1908. The original consignment went to Germany and was from there doled out in small numbers to the various dealers in Europe. It is a most desirable species and a comparatively free breeder.

A very interesting collection of birds, several of which are new to Aviculture, was received at the zoological department of Messrs. Gamages on 31st May, having been collected and brought home by Mr. Webb, to whom belongs the credit of landing them in most beautiful condition, in fact we have never seen birds, newly arrived after a long voyage, looking more perfect. Almost any one would have been suitable for a place on the show-bench.

There were several examples of the White-fronted Bee-eater (*Merops bullockoides*), an extremely beautiful species, green with the forehead white, the crown blue, and the throat bright carmine. A delightful bird for a sunny outdoor aviary provided with a well-warmed shelter. A good insectivorous food, plenty of mealworms, and a piece of meat to attract the flies, are necessities to the successful keeping of Bee-eaters.

The Blacksmith Plover (*Hoplopterus speciosus*) is one of the most handsome of the waders, a combination of white, black, and lavender-

grey. There were only three in the collection, two of which went to Mr. Ezra's collection and the third to the Zoo.

There was a single example of the Bronze-winged Courser (*Rhinoptilus chalcopterus*), a rare summer visitor to South Africa and another addition to the avicultural list. It is clad in various shades of brown and sandy buff, and some of the wing feathers are tipped with metallic violet following a bar of metallic green. This very interesting bird has also found a home in the Zoological Gardens.

Still another Plover, much smaller than the others, and of which there were three specimens, was the Three-banded Plover (*Ægialitis tricoloris*), a small bird allied to our Ringed Plover, with the breast ornamented with three bands—black, white, and black.

The Pied Babbler (*Craterops bicolor*), of which there were several examples, is a most attractive species, entirely white, with the exception of the wings and tail, which are black.

There were four specimens of the exquisite White-breasted Sunbird (*Cinnyris leucogaster*), which, in addition to its brilliant colouring, is said to have a very sweet song. Anderson tells us that in the pairing season its voice is "enchanting beyond description, being a concentration of the softest trilling and melodious notes".

These are only a few of the best of a very interesting collection consisting mostly of rarities. We were glad to see a fair number of the Crowned Lapwings, of which species a few were imported by the same collector last year, and so far as we have heard, all have lived. It has thus proved itself a most suitable species for Aviculture.

Another Starling, new to Aviculture in this country, has been sent to Mr. Ezra by M. Decoux; a large bird of a greenish hue with a conspicuous white forehead. It is the White-capped Starling (*Heteropsar albicapillus*), whose natural habitat is Somaliland and probably Abyssinia. Its portrait appeared in the *Ibis* for 1860.

The Air Service would seem to be a most excellent means of transport for birds from the Continent. The Zoological Society recently obtained some Ruffs and Reeves from Holland which came by aeroplane. They were only a few hours on the journey, and arrived in excellent condition.

Mr. H. L. Sich, who has just moved to Worthing, writes : " I believe my Nyasa Lovebirds are incubating in a 4 inch box placed in an all-metal canary breeding cage 18 inches by 8 inches wide, where I put them during the move down to Worthing, as I had no other room. They started laying before, during, and after the move, so I have left them where they were." Certainly few birds are so accommodating, and there would be no excuse if aviculturists allowed this species to ever become scarce in captivity.

Prince Taka-Tsukasa, a most enthusiastic aviculturist, writes from Japan :—" I am having quite good luck this breeding season, I have three grey and four mauve Budgerigars from mauve parents, and now four more very young birds in the nest and six young blue ones, one of which turned white, and now ten more small blues in the nest and some dozens from yellow and green birds. One young Abyssinian Lovebird, a dozen Reeves and two dozen Amherst Pheasants, three or four Swinhoes, one Impeyan, four Cabot's Tragopans, and I hope to have young Pallas' Sand-grouse as I have a bird sitting on five eggs." The Prince sends his best wishes to his bird friends in England, who, we are sure, will wish to congratulate him upon his success.

Hearing that the Abyssinian Lovebird had been bred last year by Mr. Alfred G. Groves, of Bath, we wrote for further particulars and the date of leaving the nest, and Mr. Groves writes :—" The Abyssinian Lovebird bred last year left the nest the second week in June. The parents came from the late Mrs. Dalton-Burgess' collection. Three eggs were laid, but only one was fertile, and the young remained in the nest for a long period."

CORRESPONDENCE

THE MANAGEMENT OF RED-CAPPED PARRAKEETS

SIR,—The rare and interesting Pileated or Red-capped Parrakeet of Western Australia, although it has been bred in England, is certainly a tricky bird to manage and to acclimatize. Either it is incurably wild and nervous, or, if hand-reared, excessively bumptious and greedy. For many months after importation it is exceedingly subject to chills, and it is about the only Parrot that ever catches cold through injudicious bathing.

If one keeps it in a cage with a view to acclimatizing it very gradually, it proceeds to over-eat itself, even if fed on plain canary seed, and dies of fits, so one may be faced with the dilemma of turning it out and losing it from chill or keeping it in and losing it from fits! After a good deal of trouble with a bird I could not turn out on account of the cold, which began to have the usual apoplectic attacks, I tried a strict system of rationing, allowing it only a teaspoonful of canary seed a day, and as much fruit and green food as it liked. The plan answered admirably as it has never had another fit and yet keeps in very good condition. Birds in an aviary do well on an ordinary mixture, working off any tendency to fatness by constant activity. At present mine are desperately anxious to breed, but unfortunately I have only males.

TAVISTOCK.

MUSKY LORIKEETS

SIR,—From time to time I have seen it stated that the Musky Lorikeet (*Glossopsittacus concinnus*) produces a smell of musk. I note that M. J. Delacour repeats this assertion in his article on Lories in last month's Magazine. I possessed a pair of this charming Lorikeet for some considerable time, and in spite of careful observation, never detected even a suspicion of musk. I should like to know if this species produces this odour in captivity or only in the wild state, as I presume it really does produce an odour of some kind to have got its name. If so, how? or is the whole matter a fallacy? Perhaps M. J. Delacour or any member who has had experience with this species would be so good as to make known his observations.

A. A. PRESTWICK (MRS.).

[This species is said to emit a musky odour when first captured or shot, but this probably decreases or disappears when it is fed upon artificial food in captivity. We have never noticed this odour in captive birds.—ED.]

THE HARDINESS OF ORNAMENTAL FINCHES

SIR,—I have just returned from New Zealand, and it may be of interest to some readers of the *AVICULTURAL MAGAZINE* to hear how my small birds have fared in the hands of very inexperienced caretakers during my absence of nine months. Knowing the adverse conditions they would have to endure while I was away from home, I disposed of many of my birds before leaving in September last, thirty-nine being the number left. Included in this number were the following: Javas, Saffron Finch, Orange Bishop, Nonpareil Buntings, Combassou, Bronze-wing Mannikin, Zebra Finch, Fire Finch, Pink-cheeked Waxbill, Orange-cheeked Waxbill, Lavender Finch, Silverbill, Pekin Nightingale, Grey Singing Finch, Cordon Bleu.

The winter here, I understand, was all before Christmas, the weather after being mild and damp. The thermograph charts of temperature in the aviary shelter show twelve days of 10° of frost between 19th November and 7th December, giving an idea of what the survivors stood. The birds were allowed freedom to go outdoors or remain in as they pleased. The result was a loss of fourteen, and included two Pekin Nightingales, who would bath in the coldest weather late in the day, two Bronze-wing Mannikins, two Fire Finches, one Lavender Finch, four Pink-cheeked Waxbills, one Snow Bunting (cat), two Redpolls (cat).

The Lavender Finch was an old cock I had had two years. Fire Finches were old birds, two young ones are alive and busy nesting. Pink-cheeked Waxbills all gone, evidently more delicate than Orange-cheeked, who have stood it well. If I had been at home I should have caught up the Pekin Robins and kept them away from too much bathing, as I had trouble with them the previous winter from the same cause.

All the others are in perfect condition, the hardening seems to have improved the colour and quality of plumage, particularly in the Nonpareil Bunting (cock); he is a beautiful bird and full of beans. Silver-

bills are as hardy as Sparrows, and breed like them. My old cock Zebra Finch is thoroughly at home now after his fourth winter outdoors, and he wants a mate badly. He shall have one and deserves it.

I was really astonished to find the Fire Finches alive, also the Cordon Bleu; it only goes to prove that we do not know what birds will stand hard weather until we try.

JOSEPH APPELEY.

NESTING HABITS OF LOVEBIRDS

SIR,—I wonder what definite and accurate information exists as to the breeding habits of Red-faced, Peach-faced, and Abyssinian Lovebirds in a wild state? I have read that the first breeds in holes in trees, the second in the nests of the Sociable Weaver-bird, while a relative of mine, who has lived for some time in Abyssinia, told me that the Abyssinian Lovebird appeared to be breeding in the nests of another species of Weaver. It would be interesting to know whether genuine Lovebird eggs have been taken from the sites mentioned or from others, and, if so from what others. I have found that the Madagascar and Black-cheeked Lovebirds, when kept at liberty in this country, nest readily in holes in trees, as though accustomed to the practice; probably the Nyasa Lovebird would do the same. The Abyssinian Lovebird I have never kept at liberty. The Peach-faced Lovebird makes no attempt to use trees but searches buildings for an available nesting place and will make use of a hole such as would satisfy a Starling. The Red-faced Lovebird makes no attempt to breed at all, which almost suggests that it can find nothing in an English garden at all suitable to its requirements, whatever they may be. It is a very unusual thing for a true pair of birds of any species to pass year after year at liberty in perfect health and make no attempt at nesting.

TAVISTOCK.

A RARE FINCH

SIR,—With regard to imported species of the Fringillidæ, I think I have a pair of a species which is new to Aviculture. Last summer Mr. Chapman imported some birds which for want of a better name

he called "Wild canaries from Africa". When I called he only had two left, both hens, which I bought. I took one up to South Kensington where it was identified as *Anomalospiza butleri*. Later on I found a cock-bird at Harrod's.

They could tell me very little about it at the Museum except that it was rather rare, which I think must be because being a plain brown bird with a yellow throat and under parts it has very little to recommend it to either the specimen hunter or the trapper.

I think mine are nesting now, but high up in the shelter of the aviary in a basket nestbox where I cannot get at the eggs. If all goes well I will write a further account of them. I do not know how many were imported or if any were sold elsewhere. The song is a "Chēē", rather metallic, repeated about twelve times, very much like the Corn Bunting and sometimes like the Meadow Pipit.

It approaches the hen on a perch or on the ground with both wings fully extended trying to show off as much of the yellow under parts as possible. They seem to be more of a Bunting than a Finch.

They are not mentioned in the catalogue, vol. xii, which is the only one I have.

H. L. SICH.

M. DELACOUR'S NEW BIRDS

SIR,—Although I fear that the following notes may not be of interest to certain members of the Society as they do not apply to the species commonly kept in English aviaries, I am venturing to send you a list of the birds which I sent home from Indo-China, Japan, and America, and which are now flourishing in my aviaries.

From Indo-China :—7 Rheinardt's Argus Pheasants (*Rheinardtius ocellatus*), 1 Siamese Fireback, 8 Specifer Peafowl, 3 Nicobar Pigeons, 5 Long-tailed Doves (*Macropygia leptogrammica*), 1 Eastern Sarus Crane, 2 Renauld's Ground Cuckoos (*Carpococcyx renauldi*), 3 White-bellied Cissas (*Cissa hypoleuca*).

From Japan :—3 pairs of Copper Pheasants, 1 male Ijima Copper Pheasant, 3 pairs of Green Japanese Pheasants, 1 pair Korean Ring-necked Pheasants, 1 Chinese Spot-billed Duck, 4 Japanese Blue Magpies, 1 Jap. Bullfinch, 3 Yellow-throated Buntings (*Emberiza*

elegans), 2 Jap. Meadow-Buntings (*E. cipiopsis*), 1 Jap. Blue Fly-catcher (*Cyanoptila*), 7 Jap. Zosterops, 5 Varied Tits, 3 Loo-Choo Robins, 3 Jap. Robins.

From America :—1 pair Hutchins' Geese, 1 pair Least Geese (*Branta minima*), 1 pair Blue Snow Geese, 4 South American Comb Ducks, 1 female Orinoco Goose, 1 pair Canvas-backed Ducks, 1 male Rose-breasted Grosbeak, 1 pair Blue Birds, 1 pair Baltimore Orioles. The last six birds were kindly presented to me by the Zoological Society of New York, as well as a fine pair of Kangaroos.

Although I had already bought some Rheinardt's Argus in 1924, which arrived in miserable condition and soon died, the present birds in my collection are the first to live in good health in Europe. It is a very desirable addition to my collection of Pheasants. The very rare Renauld's Ground Cuckoo, which is only represented by half a dozen specimens in the museums of the world (London and Paris), one which I gave last year to Lord Rothschild is a notable addition to aviculture. My friend and associate aviculturist in Indo-China, M. P. Jabouille, now has seven more in our aviaries at Hui. We have also there, in good health, three Elliott's Pittas, which, up to this year, had only been known through the two (male and female) type-specimens in the Paris Museum, and which we were fortunate enough to rediscover this year. It is a gorgeous bird, of different shades of blue and green above, yellow striped with black underneath. I hope to import some alive on the return from my next trip. M. Jabouille has also live specimens of the Annamese Pitta, a big brown bird, with a greenish back. The White-bellied Cissa is also imported for the first time, and is a rare species. All the Japanese birds, most of them so rare in Europe, were either presented or procured by my Japanese friends, Prince Taka-Tsukasa, Dr. N. Kuroda, M. Matsunaga, and F. Mitsui, whose kindness to me during my visit to their country I cannot acknowledge sufficiently. All these birds will remain in my collection or in that of my friend, Mr. A. Ezra.

J. DELACOUR.

A PIGMY PARROT

SIR,—I see in the AVICULTURAL MAGAZINE for June that no Pigmy Parrots have ever been imported, but I have an idea that I saw an account, some few years ago, that one or two of these tiny birds escaped in the Crystal Palace about the time a bird show was to be held. I am not sure whether judging was far advanced or not. It was stated at the time that the bird was rare, but I don't know if the species was settled. Apparently no recapture was made, and the bird was lost to aviculture. You may be able to ascertain if there is any record, but I feel sure that I have some foundation for my inquiry.

J. WEIR.

[In the AVICULTURAL MAGAZINE for March, 1911, appeared an account of the Crystal Palace show of that year, from which we quote the following paragraph: "M. Pauwels sent a so-called 'Pigmy Parrot', which, unfortunately, escaped before the show and was not re-captured. This bird was not, however, a true Pigmy Parrot (*Nasiterna*), but a species of *Cyclopsittacus*. No specimen of any species of true Pigmy Parrot has ever been seen in Europe so far as I am aware."—ED.]

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We have received during the month of June magnificent collections of Birds from Abyssinia, Australia, India, Mexico, and South Africa, and we think we are quite safe in saying that there have never been such large and splendid collections of Birds to be seen under the same roof before, not only in England but throughout the entire world, and a visit to our premises cannot possibly fail to be of great interest to those interested in living Birds.

Perhaps one of the most popular of the Birds which we have recently received is the **Black-cheeked Lovebirds**, one of the most desirable of this charming family, and all interested in a pair or pairs of these most rare and attractive species should not fail to advise us early.

It may be of interest to Aviculturists to hear that before these Birds had been in England for a week at least 3 pairs were reported to us as having commenced breeding operations.

Below we give a resumé of the more interesting Birds which we have in stock at the moment, but this list is, owing to the lack of space, by no means complete, and all are recommended to write for a copy of our Monthly Notes and current Price List :—

ABYSSINIAN BIRDS.—Royal Starlings, Spree Starlings, Blue Rollers, Pigmy Owls, Pigmy Falcon, Donaldson's and White-breasted Touracos, Coolie Birds, Sun Birds.

AUSTRALIAN BIRDS.—Galahs, Black Cockatoo, Blue Mountain Lories or Swainson's Lorikeets, Rozella Parrakeets, Stanley Parrakeets, Adelaide Parrakeets, Rock Pebbles, King Parrots, Red Rumps, etc. Two of our Collectors arrive from Australia in the middle of July with a very fine collection which cannot fail to be of great interest to all.

INDIAN BIRDS.—Blue-winged Sivas, Shamas, Dama Thrushes, Tits, Various Bulbuls, Black-headed Sibias, Silver-eared Mesias, Barbets, Blue Verditer Flycatchers, Rock Mynahs, Scimitar, etc., Babbler, Orioles, Rufus-bellied Niltavas, White-crested, Laughing Crested Jay Thrushes, Robins, etc., etc.

MEXICAN BIRDS.—A magnificent collection of Rainbow Buntings, Nonpareil Buntings, Indigo Blue Buntings, Grey Mocking Birds, Blue Mocking Birds, Yellow-winged Sugar Birds, Mexican Parrotlets, Waxwings or Cedar Birds, Virginian Scarlet Cardinals, Cocks and Hens, etc., etc.

It may be of interest also to Aviculturists to hear that we were successful in landing 4 magnificent specimens of 3 different species of HUMMING BIRDS in perfect health and condition which are now in the possession of one of our foremost Aviculturists.

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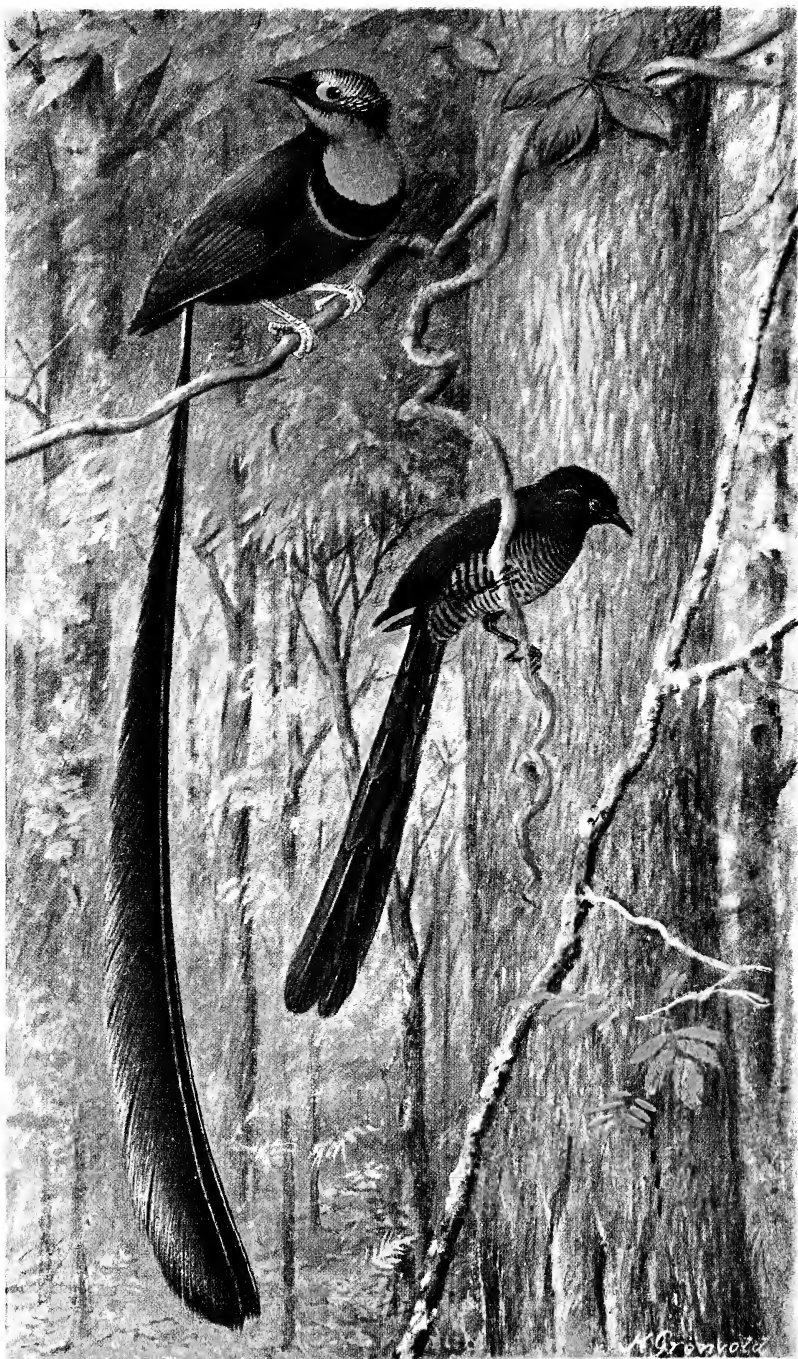
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IN FREEDOM & CAPTIVITY

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AUGUST, 1926.

PRINCESS STEPHANIES BIRD OF PARADISE (*ASTRARCHIA STEPHANIÆ*)

By WALTER GOODFELLOW

As I recently landed three of these birds over here alive, I have been asked to write something from personal experience about them in their own country, that is among the high mountains of South-East British New Guinea, or Papua as it is now officially called.

This is not the first importation, although it has not been exhibited in the Zoological Gardens before, for in 1909 I brought over for the late Mr. E. J. Brook no less than seven, comprising four fully adult males and three females. One male died about a month after arrival, but the rest lived for some years; the longest, I think, eight. These two lots, however, are the only ones so far to have left their native country alive, where they live far inland along the tops of steep razor-backed ridges very difficult of access, but more of this later.

Like many of the other dark-plumaged Paradise Birds, it is difficult to describe, with the exception of a few fixed colours about the head and chest; it changes colour from whichever angle you look at it. Many would think at a first glance that the greater portion is black; but in reality there is little or no real black about it except the primaries. The following is Bowdler Sharpe's description of the adult male:—

“General colour above olive green of a velvety texture; rump and upper tail-coverts blackish; wing-coverts black with an olive-green

gloss; quills black, with a purplish gloss on the inner secondaries; tail feathers black, the inner ones with white shafts, and with a beautiful purple gloss, the edges recurved; head metallic steel green, with a purple gloss; forehead and sides of face as well as the throat and chest glossy emerald-green; ear-coverts more steel blue, but becoming purplish as they form a frill on each side of the nape; sides of neck and a broad band across the chest bronze velvet, with a lilac or purplish reflection; the chest band edged below with fiery copper which separates the breast from foreneck, rest of under surface coppery red with metallic green shades on flanks and abdomen. Total length 31 inches, tail about 26 inches."

I may state here that when one of Mr. Brook's birds died, the tail measured close on 31 inches, and that of another $29\frac{1}{2}$ inches. Both were in unusually fine condition. The basal white shafts of the tail feathers mentioned above are a very conspicuous feature of the bird and suggest that it has lost the upper tail-coverts which ought to conceal them. Another and still more striking peculiarity is the way these long and broad feathers blow about, and even in a forward direction under the perch, for all the world as if they were broken at their base or only badly fastened on to the bird. I remember that after Mr. Grönvold had been up to Hoddam Castle to make some sketches of the birds from life, and brought the results back to the Natural History Museum, it was remarked that it was an impossibility for the tail to assume the positions he had depicted. My friend, the late Mr. Ogilvie Grant, drew my attention to it, but I told him it was quite correct, as he himself found out later, and often referred to it.

This species was first described by Finsch and Meyer in 1885, but another imposing looking member of the same genus was known as far back as 1782, but has never yet been brought over alive.¹

The frills formed by the ear-coverts as described by Sharpe are only seen, however, when the bird displays, and are then one of its most striking features. In captivity the Stephanies are remarkably tame and confiding. They took insects from my fingers within half an hour of being caught. I cannot remember any other species of bird from any part of the world which would do this, except the still more remarkable

¹ This is *Astrarchia nigra*, from the mountains of North Dutch New Guinea.

Meyer's Sickle Bill (*Epimachus meyeri*), which, somewhat strange to say, comes from the same locality as the Stephanie. They are seldom found lower down than 8,000 ft., and there are only two other members of the same family as far as I know found still higher. These are Sir Wm. Macgregor's Paradise Bird (*Macgregoria pulcher*) and Lady Macgregor's Bower Bird (*Loria loriae*). I caught by a fluke one of the latter in 1909 when catching Stephanies and Meyers, and it lived for several years over here. When it arrived it was in olive-green immature stage, but soon moulted out to the adult male plumage. It was a lovely little bird, and almost as tame as the other two when caught. *Macgregoria* I have seen alive living as far as I know only on Mount Victoria and the adjacent Range, but I have been told it is a very inquisitive bird, easily attracted by chopping wood or some such sound; so it looks as if it might be as tame as the others, and perhaps far easier to catch. The others keep almost entirely to the highest trees in their region, but there is a time of the year when they come nearer the ground, when the pandanus fruits are ripe. There are many species of these weirdly shaped trees in New Guinea from the coast right up to quite high altitudes, each with a different shaped fruit, some kinds being of an enormous size. All are eagerly eaten by the Paradise Birds in their district. Some are of a greasy nature, and make the birds very fat while the fruit lasts.

I have found the Stephanies rather silent birds. I cannot remember having heard the three I recently brought home utter one sound during the time they were under my care, which was over four months.

A female built several nests in Mr. Brook's aviaries, and laid two eggs, but both were clear, the male bird at the time being in full moult. It was found to be quite an effort for the males to grow these long tail feathers perfectly; so at that time they received special attention in the matter of food supplies or they were defective in some way. They had access to outdoor flights on almost every day in the year. They much preferred to come out on dull, drizzling, and even foggy days. Their lovely colours are certainly seen to the best advantage out of doors, in fact, only then can they really be fully appreciated. In their own mountains the climate is anything but ideal. There is certainly a short season of clear sunny days, but more often than not it is raw,

exceedingly wet, and with spells when the clouds envelope everything in a dense wet fog, sometimes for two weeks at a stretch. It seems strange that living under such conditions the Stephanie and Meyer appear to suffer no inconvenience when brought down to the hot, steaming coastlands; much less so than some of the other Paradise Birds, such as the Superb and Lawe's Six-plumed, which live at a lower altitude. The first I brought home came through the Red Sea during the month of August, when it was exceptionally hot even for that month. The present male in the London Zoo did, however, suffer from the heat one day on the voyage home, and I thought for a time I was going to lose him. It was in Thursday Island, when taking the birds on board the boat for Singapore. Owing to a temporary strike of the wharf labourers, the cages were left standing in an open truck on the pier in the hot sun for nearly an hour. The men would neither move them themselves nor allow me to do so. When they were finally arranged on board I found the Stephanie in a very bad way, and it only recovered after I had placed it in the shade, turned to catch the breeze. I kept it in this position all night, and took my bed up alongside of it to make sure that it was not disturbed by rats, ship's cats, or the crew. The other two never suffered in the same way. This species is much less pugnacious than some of the others, for I remember in 1909, when I ran short of cages, I brought two males over together. This is not advisable though, for if they do not actually fight, one may be keeping the other from its proper share of the food.

The Stephanies seem to be gregarious and were invariably found feeding in the same trees with the Meyers. They are not rare in their own districts. One reason may be that in the plume-hunting days few of the shooters cared to take the risks of going so far up the mountains with the attendant difficulties of carrying supplies.

I had hoped to have brought home as many this time as in 1909, and I should have done so, but the people I took up with me—Deva Devas—were a truculent lot, adverse, like all Papuans, to leaving their own region; impatient of the cold, so that after three days' stay on the high ridge, and just as I was beginning to get the birds, one discontented man set the others off, and all started on the three days' march back to their homes. I should have been left helpless there had I not returned

with them, and no amount of persuasion or bribery would induce them to remain even one day longer. I found afterwards that a series of big dancés and feasts in their tribe was the real cause and although I was still among them after these were all over, I could not get them to go back again.

When I caught my first Stephanies and Meyers on the former expedition, I recall how great was my anxiety as to whether they would feed or sulk. Nobody had ever had one alive before, and the Meyer especially, with its long and delicately curved bill, seemed so ill adapted to cage life. After leaving the first one alone for half an hour, I anxiously returned to peep at the cage, when a glance showed that it had already fed on papayia. I remember my companion (a half-caste Samoan who acted as interpreter) and I killed the fatted calf to celebrate it. The calf in this case, I believe, was a solitary bottle of whisky I had among the stores.

In their habitat these birds never seem to come down into the valleys, but always to keep to the ridges, probably making long journeys in this way. If the fruits on the highest ridges are not ripe, probably those on lower ridges will be. Even after their capture, troubles are by no means at an end, for it is extremely difficult so far in the mountains to get a supply of fruits. It must be remembered that newly caught birds do not take for a long time to the artificial foods we get them to eat over here ; so there is little or nothing beyond fruit and live insects to tempt them, and the latter are very hard to get regularly for any number of birds. Then, again, the heart-breaking journey back to the coast, when day after day the poor birds are shaken about on the backs of careless wild savages, who attach no importance to their load whatever, in fact, they cannot understand what interest we see in them, or why we lavish so much care over them, or waste good fruit on them. They are just birds, good to eat, and beyond that they do not appeal to them in the slightest. Again, these carriers are just as likely as not to abandon their loads on the trail, and run off never to be seen again. At certain times during the day the men must all be assembled to give the birds a short rest and time to eat and drink. after which, if great watchfulness is not maintained it is more than likely they will turn the cages upside down and start to carry them off again

in that position. Probably, too, a suitable camping site may not be reached until long after dark and in pouring rain, when, however tired you may be, poles have to be cut, flies erected to house the cages, and others for ourselves ; food cooked, water fetched, and the hundred and one things incidental to a camp. Then it is impossible to start again very early in the morning—I mean at five or six o'clock—as all the cages have to be cleaned, the birds fed and watered, and given a chance to feed, after which perhaps off again in pouring rain. A little wetting more or less is immaterial, however, when rivers and streams have constantly to be crossed. Undoubtedly the most killing parts of all are those appalling razor-backed ranges which run parallel with the coast along almost all the mountainous parts of the country. Almost as steep to climb, some of them, as the sides of a house, and still worse to come down the other side, many of them only a few feet across at the top, in one endless procession. Add now to all this, mud, thorns, stinging bushes, and plants, and almost every known kind of insect pest which never leave one. Some will naturally ask, why go to all these hardships and discomforts just for a few birds ? To them I can only answer, I don't know, but something calls one back again and again, although each time I have been to New Guinea, north, south, east, or west, I have inwardly vowed that if I got out of the country alive I would never go back again, but I do. Perhaps it is the call back to nature, where it is to be found in its wildest and most savage moods.

To me the greatest wonder of all is when I look at these New Guinea birds safely housed over here at last, however they came through it all alive ; and I can't help standing before them with my mind going back to the inaccessible mountains from which they came, their capture, the anxious moments, the awful camps we had on our march to the coast, the difficulties of fruit supply ; the wild, fierce-looking men who carried them, journeys by canoes, schooner, and steamers ; the worrying changes en route to England, and many other hardships only too soon forgotten in the comforts of civilization again. But the wonder is still there, and I am the only one who knows it all. Therefore to me they awaken the same thoughts each time I see them and so long as they live with us over here.

AMAZON PARROTS

By E. MAUD KNOBEL, F.Z.S., M.B.O.U.

The family of Amazon Parrots is a fairly large one, comprising some forty-two or more known species. With the exception of one, Guildings, they are mostly green in colour, with other brilliant hues, such as red, blue, and yellow, on the head, wings, tail, etc.

They come from Mexico, the southern parts of North America, Central America, South America, as far down as Brazil and some of the adjacent islands.

They vary very much in size, some measuring not more than 8 inches, while others may be as big as 21 inches. Individuals of the same species sometimes vary considerably in size, due probably to locality.

Many are well known, like the Blue-fronted, and are imported in hundreds, or even thousands, every year, to find homes amongst both rich and poor in England and the Continent. Others are extremely rare and seldom if ever imported. Two, the Imperial and Guildings, are almost extinct, and of one, *Anattereri*, there is not even a skin either at the Natural History Museum or Lord Rothschild's Museum at Tring.

One may divide these Parrots into three groups: (1) Those that have white beaks, which are to be found mostly in Mexico and the southern parts of North America and the islands, Cuba, Dominica, Jamaica, St. Vincent, and the Bahamas; and I may add here that where a Parrot has a white beak he also has white or yellowish feet. (2) Parrots that have black beaks with a red or yellow spot, found mostly in Central America. (3) Those with black beaks, which come chiefly from Brazil; birds having black beaks have grey feet. There are exceptions to this rule, but taken as a whole I do not think there are any Parrots with black beaks found in Mexico, nor are there birds with white beaks found in Brazil.

The Amazon Parrot in its native state does not build a nest, but lays its eggs in a hole in a tree. The eggs are white and generally two in number. With the exception of the Bahama Parrot, which I believe was bred by the late Mr. Bonhote, none of these Parrots have bred in this country.

The question of sexing Parrots has often been a problem, for the plumage in the Amazons is the same in both male and female. Many suggestions have been put forward for determining the sex, such as the shape of the beak, whether long and narrow or thick and broad, the colour of the eye, the shape of the head, whether round or flat, and so on, but none of these have proved very satisfactory.

Personally I have always sexed my own birds by feeling the pelvic bones. In the male bird these bones lie so close together that they feel as if they actually touched, but in the female they are wider apart. In a young female they may be very close together, though they never *actually* touch, but as the bird becomes adult they widen until they may be an inch or more apart, wide enough to allow the egg to pass through.

In keeping a number of birds together I have noticed that the only males I have had are as a rule smaller, more compact birds than the females and the green is of a deeper shade. But male Parrots in this country are extremely rare, and it is not often that one has the chance of seeing the two sexes together. One has to ask why this is—I think there are probably three reasons: First, they are harder to catch if adults; secondly, they are far more delicate than the females; thirdly, the traders go for the big, fine looking birds, and leave the smaller ones behind as not being so desirable.

Most of this group are eminently fitted for cage and aviary life, and make charming pets, even the most fastidious person could hardly say it was cruel to keep a Parrot in captivity. They delight in human society, and are extremely responsive to kindness, and the more a Parrot is petted and played with the more fascinating pet will it become. A Parrot should not be left alone in a room for long at a time, or it will become dull and mope, and if it has nothing to play with will suffer from ennui, and may take to feather plucking for the sake of something to do. Birds treated like this deteriorate in intelligence and become uninteresting, and are not half so amusing as those that see plenty of society. That is why Parrots do so well at the Zoo; they not only have a constant stream of visitors, but all sorts of titbits are continually being offered to keep them on the *qui vive*. No one, therefore, should undertake to have a Parrot unless he or she is prepared to devote a certain amount of time to it.

Parrots are not only highly intelligent and therefore highly sensitive, but they are very active birds, and need plenty of exercise and amusement to keep them in health and spirits. Personally I prefer a square cage with a flat top, with china seed- and water-pots, and I do not think it matters if it is not very big, as long as a bird is constantly let out to exercise its wings. I do not mean by this that he should fly about the room—they are clumsy fliers at the best, and if they have their full wings have a way of dashing into windows and other objects in the room, to the detriment of themselves and everything else. So I keep one wing slightly cut, and if they try to fly they fall on the floor. They very soon learn this, and by the time the wing feathers have grown again the desire to fly has probably left them, and they are quite content to flap their wings on a stand or the back of a chair.

For my own Parrots I have a rather heavy steel dog chain hanging from my ceiling with a hook at the bottom on which I hang each cage in turn. Here the birds can climb up and down and exercise their wings to their heart's content.

I may add here that the links of the chain should be so big that there is no possibility of the beak or claws being caught. I also give my birds a small piece of steel chain for them to play with, which I hang on one side of the cage. They will go through it link by link, an occupation which keeps them happy and amused for hours.

In all cases steel chains should be used, as brass ones are apt to get verdigrease upon them, which is poisonous. Parrots also need something to exercise their beaks upon, and sticks of wood, reels of cotton, etc., make the most delightful playthings. The best wood is willow, beech, poplar, chestnut, and hazel, as these will not splinter. To those living in the country sticks of wood with the bark on are easily supplied; but to those living in towns the supply of these often presents a real difficulty, and to those I would recommend clothes pegs. They are cheap—about a penny half-penny a dozen—they are made of a very hard wood that does not splinter, and one will last a few days. Paper is also very useful, old letters or bits of note-paper they will play with for a long time.

When once an Amazon Parrot is acclimatized, it is moderately hardy, and can easily be kept in confinement for many years. The best food

mixture I have found consists of equal parts of the best mammoth Spanish Canary seed, sunflower seed, and hemp seed ; add to this in the same quantity a good mixture of poultry corn, containing wheat, oats, dari, and maize. Personally I prefer white or striped sunflower seed, as black is apt to stain the excreta, and I am sure it pays well in all cases to give the very best seed. To this may be added fruit of all sorts, pea nuts, dry biscuit, and mine always have a small piece of toast and butter or marmalade for breakfast and a small piece of cake or sugar for tea. The best fruits are apple, banana, grapes, and cherries, which they seem specially fond of ; but strawberries and raspberries I have never found a Parrot care much for. For green food, lettuce, watercress, and peas in the pod, but no green food should ever be given that has had the frost upon it.

Coarse sand should be used for the bottom of the cage, which should be cleaned out daily and a clod of earth for them to peck at every few days keeps them in health. Water, of course, should be given, fresh every day, and I always use water that has been kept in a room some hours and not straight out of a cold water tap. For freshly imported birds or delicate birds, it should be slightly warmed. The vessel in which the water is given should be of china and should not only be rinsed out every day, but *wiped dry* in order to entirely get rid of the slimy deposit that water leaves. Many people have an idea that water is bad, or, at least, unnecessary for Parrots, but when one realizes that these birds come from a country teeming with moisture and full of luscious juicy fruits, such as we know nothing of, to be deprived of water and fed on a hard seed diet is nothing short of cruel. I had a Parrot once that had been treated like this, and had had no water for four years—all it was given was a spoonful or two of tea once a day. She was a fine big bird, but the feathers were hard and dry and had no gloss on them whatever. I had of course to use great caution in giving her water at first or she would have over-drunk herself. I gave just a few sips at a time, until at the end of a week I was able to leave the water in the cage for her to help herself as she pleased. It was really extraordinary at the end of a month how different the plumage had become, the feathers lost all that wiriness and assumed a smooth soft glossy appearance.

A Parrot should not be left in a draught even for a few minutes ; at the same time I do not think they should be exposed to the full glare of the sun ; few birds if left to themselves choose to sit in the sun for long at a time. They should, I think, too, have their cages covered over at night, leaving an air-hole at the top ; they like the protection from light and it keeps them warm.

Most Parrots have strong likes and dislikes, some liking men best while others attach themselves to women ; it used to be thought that this was a matter of sex, male birds liking women and vice versa, but I feel sure that this has nothing to do with it. Why it is, I do not know, but certain it is that you will never find the same Parrot equally attached to both a man and a woman. The same way with children—some love them and get very excited if a child enters the room, others dislike them and are not to be trusted with them. At the same time a Parrot seems to learn more easily from a woman than a man, and they will imitate children in an extraordinary way, laughing and crying and quarrelling exactly as they do ; the high-pitched shrill voices seem to appeal to them rather than the deeper voice of a man. It seems a well-known fact that Parrots more easily pick up sounds outside a house than those inside, and are able without any trouble to imitate cocks crowing, dogs barking, motor-horns, the bleating of sheep, and so on.

The best time to teach a Parrot to talk is when he is quiet, and a very good plan is after he is covered over for the night to repeat some ten or twelve times what you wish him to learn, and then without another word leave the room and let him think it over. Some learn very easily while others never get beyond a word or two, but all can make some sort of noise and all can scream at times. If one has a young bird the screaming can be checked to a certain extent by covering over, or putting the cage on the floor, or taking him out and distracting his attention in some way, but an old and inveterate screamer is hard to do with, for he becomes a nuisance to everybody around him, and if there are other Parrots he may teach them to take to this horrid habit.

The best time, too, for taming a Parrot is in the evening, they are far gentler then and can be coaxed and handled more easily, whereas

in the morning they are often, like some people, inclined to be "nervy".

I never let my Parrots come out of their cages by themselves, but always make them step on to my hand first. They soon learn to do this, but it needs a little courage to start the first time with a strange Parrot. Patience and gentleness are the two great factors for training a Parrot and gaining its confidence. Never be in a hurry, and once be hasty you may undo the work of months. But once it is tame there is no end to what it will allow you to do with it—turn it upside down, roll it on its back as if it was a ball of fluff, kiss it all over and, in fact, do just what you like with it, and it will never turn on you, but just play gently with your fingers.

Sometimes it is a difficult problem to get a Parrot out of the travelling cage or transfer it from one cage to another. It is useful to know he will always go upwards. So if you lie the cage he is in with the door open uppermost, then put the cage he is to go *into* with the door open downwards, and having the two doors together, you will find he will at once walk into the upper cage.

Parrots are long lived and many take a long time before they feel "at home" in new surroundings. A newly imported Parrot that has come straight from a dealer generally takes about a month to settle down, but a Parrot that has come from another home may take much longer. I had a bird once that belonged to an old lady, and he was supposed to be a marvellous talker. I heard him several times before I decided to buy him, so I knew he *could* talk. But having got him home he became dumb, and it was over six months before he even uttered a sound. Then quite suddenly when we were sitting at dinner one night he started, and we were spellbound. He was certainly a wonderful bird, and from that moment he was all right. Another time I brought home a Parrot and apparently it seemed in the best of health, but for three days it ate nothing and I got most fearfully worried about it. I tried everything I could think of, but nothing seemed any good; suddenly I had a brain-wave, and it certainly *was* an inspiration—I took the seed out of the china dish and put it into a zinc one. The trick was done—he fed from that moment, and though I have had that bird since 1917, he still won't eat his seed except in a zinc dish, though he does not

mind the water in a china one. It just shows what conservative creatures they are.

The age of a Parrot, especially after a few years, is difficult to tell, but there are certain signs which denote young birds. Very young birds are generally uniformly green all over, showing no blue or yellow on the head, or wherever the predominant colour of the adult bird may be, and no red on the shoulder, but birds as young as that are seldom seen on the market. When they arrive here they have generally moulted out, and show some marks of the adult plumage. But even when moulted out, there are other signs to tell if a bird is young. The eye is paler and does not show the bright orange or red when the pupil is being dilated. In the case of birds with black beaks, the beak is greyer in the young bird, becoming blacker with age, and the nails on the feet are black at first, afterwards turning grey. The feet in young birds feel very soft and supple, in older birds they become hard and rough, and in very old birds extremely so.

To my mind there is no more delightful pet than a young Amazon Parrot, preferably a Blue-front, that you can bring up and teach as you like, and they are well worth all the trouble and patience they involve. But it does mean both of these and a certain amount of risk too, to get it accustomed to our food and variable climate. The matter of feeding often presents a difficult problem, for when brought over they are mostly fed on a food called farina, if not that then on boiled maize. If only the importers would get them accustomed to hard seed and water before shipping them, I believe the mortality would be considerably reduced. Young birds are often very shy about trying anything new to eat, and it is quite a fallacy to think you can starve a Parrot into eating what he does not want to. He generally prefers to die.

If possible it is a good plan to put a young bird near an old acclimatized one, then when he sees him eating apple or seed or whatever it is he will be tempted to try it for himself. The dealers often adopt the plan of keeping two birds in one cage when they first arrive, as one will copy the other in the way of eating, and they keep each other warm. But the moment they begin to recover from the long journey and to get vigorous they will have to be separated, as they

may fight and the stronger will bully the weaker, and they have a way of going for the toes and biting them off, hence the number of Parrots one sees without their full complement.

In the case of feeding young birds just imported, or birds that are sick, I find it is no good keeping to any hard and fast rule. They are sometimes as difficult to suit as any human baby, and it is often not a case of what is best for them but what they will condescend to try. The books tell you never to give tea, coffee, slops of any kind, animal food, etc., but what are you to do ? A bird that is ill will not as a rule touch hard seed, one must try *something* or you will lose your bird. And I may say here that until a bird is actually dead I never despair. They may *look* dying a dozen times a day and yet pull round. I had a case in point some few years back in a baby Blue-front. She had only just arrived, in fact, had only been here an hour or so when I first saw her. I spotted her at once because of her remarkable plumage and carried her off. She had been fed entirely on farina, and I tried everywhere in London to get this stuff but failed, so I had to resort to all sorts of other things. Bread and milk, bovril and toast, rice-pudding, potato—she would just give a peck at each in turn and then refuse to even try it again. Seed, apple, or banana she would not even try. At last one morning when I uncovered her she looked about as bad as any bird could, and I thought “ Well this is the end ”. I tried all the morning to feed her and induce her to take something, but it was no good. Lunch time came, and on the table was a plain suet pudding. I cut off a piece and put it in her cage, and to my utter surprise she tried it, ate it, and later on I gave her some more and for the best part of a week she lived on plain suet pudding ! At the end of the week she was ready to try hard seed, and to-day is one of the handsomest birds I have ever seen and a very good talker. Well, one has to ask oneself, “ What did the trick ? ” “ Was it the suet ? ” I am very much inclined to think it was. Anyhow that suet pudding broke down all hard and fast rules with me. One is told that butter is a thing a Parrot must never touch, and yet over and over again I have noticed the first thing a Parrot will go for when let out at a meal time is butter. They seem to crave for it, therefore can it be so bad for them ?

Another time I was staying on Dartmoor and early one morning

when I was still in bed I had a message that a little girl had come over the moors and wanted to know if the lady was there "that knew all about Parrots", and if she would come at once to a Parrot that was very ill. I went and found the bird lying on its side at the bottom of the cage, with its eyes shut, looking for all the world as if about to give up this life. I took it in my hand and gave it a teaspoon of brandy and warm milk. It opened its eyes. After ten minutes I gave it another spoonful. In a short time it stood up on its feet and we then gave it some warmed bovril and toast, which it took and liked. It then got up on its perch. For a week I visited it, and fed it on warmed bovril and toast, boiled potato, boiled rice, and boiled cabbage. At the end of that time it was recovered enough to go back to its hard seed and water. It was a very old bird, and though it died eventually, it lived for some months after I saw it. I have given these two examples for what they are worth.

I am not able here to go into the various diseases Parrots may suffer from; all I want to attempt to do is to suggest a few of the remedies I have found of use in bringing young or sick birds round. Warmth is always a great help. They should be kept in a room that is warmed during the winter and for a newly imported bird I always keep three sides of the cage covered for the first few weeks. I never feel a bird is really acclimatized until it has been through one winter here. But a really sick bird requires to be kept fairly near a fire. So often, on getting a young bird home, it develops one of two things, either running at the nostrils, which means a cold, and may, if not taken at once, turn to bronchitis or pneumonia, or its digestion goes wrong, and it gets diarrhoea or the reverse, constipation and enteritis. Once it develops enteritis I doubt if there is much to be done; it is a horrible disease and carries off more birds than almost anything else. But whatever is the matter a bird should be taken in hand *at once* and not left for a day or so before some remedy is tried.

For running at the nostril, bathe the nostril with a piece of cotton-wool and a few drops of glyco-thyrmoline and warm water, taking care it does not go into the eyes; then put a spot of vaseline on the nostrils. To do this it is best to get the bird out of the cage either on the top or the back of a chair, then with a cloth over the left hand seize it round the neck from the back, holding it just so that it cannot bite, but not

tight enough to throttle it, then with the right hand bathe the nostrils, etc. After a few times it seems to like it ; it is soothing and at once clears the air passages. Substituting sawdust in a thick layer for sand at the bottom of the cage, and sprinkling this with a few drops of eucalyptus will help to dry up the catarrh, but one has to remember that it is pretty strong stuff and very few drops will suffice.

For diarrhoea a few drops of brandy in the water or a small pinch of prepared chalk in the food. If it still continues, take the bird right off seed and give some other food, so as to give the stomach a rest. Toast, which is more digestible than bread, can be given with either warmed bovril or warmed milk, and I may say here that I have never found cow's milk very good ; I much prefer using Nestlé's, the sweetened kind. Rusk or arrowroot biscuit soaked in it makes a digestible diet, and to this may be added a tiny pinch of chalk. Boiled potato, boiled rice, or porridge can be tried, and apple is a wonderful help. Some birds when they are ill will only eat apple, and I just let them have as much as they like.

For constipation, if apple or banana does not help then take them right off seed, and feed as above. Some birds are terribly thin when they arrive, and these should be fattened if possible. Rolled or Quaker oats mixed with the food are very excellent and much liked. Sugar is also a great fattener. Scott's cod-liver oil emulsion is another splendid food. Some birds love it and will look eagerly for it while it is being prepared, others won't touch it, and others it does not suit at all, causing sickness. The bottle must be warmed until it will run, then take a teaspoon of it and crumble into it some sponge-cake and give twice a day. When the pupil looks very black and is much dilated, it generally means one of two things, either the bird is in pain or the heart is in some way affected. Putting the bird on a warmed hot-bottle (not too hot) may give relief for the first, and for the latter warmed black coffee with brown sugar they will take in a spoon and like, and it helps to stimulate the heart.

In conclusion there are two things to remember in birds that are ill. First that the food must be on a level with them, within easy reach, as a sick bird does not like moving about, or it must be offered to them from time to time, either in a spoon or pot. Secondly, that an ill bird

requires feeding little and often, a spoonful or so every two to four hours, and that it should not be left to go all night without something.

It is natural that all parrots should moult some time during the year, that is shed their feathers, but some do it spasmodically, only shedding a feather or two now and again, while others may do an out and out moult. There seems no rule as to what time of year one may expect this, as Parrots never seem to settle down to the altered seasons in this country from their own, and even Parrots belonging to the same species may not moult at the same time of year, but one is glad when they do not choose the winter months for this performance. Parrots about to go through a thorough moult generally start by eating enormously, entirely finishing up the contents of the seed-dish, and this should be replenished during the day if necessary; they should have as generous and liberal diet as possible to enable them to make the necessary blood to push out the old feathers and make the new ones; by doing this one prevents what is known as getting "stuck in the moult". It is curious to note that a bird about to go through the moult always starts by shedding the bastard wing feathers, also that a feather shed in one wing is almost immediately followed by the corresponding feather in the other wing.

(To be continued.)

JAPANESE AVICULTURE

By J. DELACOUR

A few years ago Prince Taka-Tsukasa gave us a very full and interesting account of bird-keeping in Japan,¹ and I knew well that aviculture was flourishing in his country; but I must admit that I was greatly surprised and delighted to see what a high level it has attained, and admired immensely the way in which the birds are housed, kept, and bred. In fact, I feel quite enthusiastic about Japanese aviculture.

¹ AVICULTURAL MAGAZINE, Third Series (1922), Vol. XIII, p. 15-22, 31-36, 47-51.

The reception given to me by Prince Taka-Tsukasa and the members of the Japanese Cage Bird Club was one which cannot be forgotten. During the three weeks that I spent in their beautiful country I was the object of the kindest attentions at every moment, and I cannot adequately express my grateful feelings. I was therefore able to visit, in company with Prince Taka-Tsukasa, under the best possible auspices, not only all the natural and artistic treasures which Japan possesses to an unrivalled degree, but also the most interesting collections of birds, breeding enterprises, zoos, and bird-shops.

Perhaps a few words on what I have seen may prove of interest to our members. It may not be out of place to give some general information on the different birds which are generally found in captivity in Japan, and the way they are treated ; but as Prince Taka-Tsukasa's article already dealt with the subject, I shall be short.¹

Although representatives of almost all groups of birds are to be found in the zoos and some large private collections, Cranes, Pheasants, and Waterfowl are the most popular among the big birds. Manchurian Cranes are very numerous and highly prized. I may have seen quite one hundred kept in different places. Their value, however, is perhaps even higher than it is in Europe, as they are so much sought after. Most of the birds, if not all, are bred in captivity in Japan, and I was astonished to find that it was quite an easy undertaking. Pairs are kept in quite small enclosures, with a little water, fed on grain and small fish. When the young hatch out they are given earthworms for the first three days. Afterwards they are fed on cut-up fish, which their parents pick up for them in their beaks. Fertility of eggs increases with the age of the birds. White-necked and Hooded Cranes which in a wild state visit Japan in the winter are also to be seen, but they are much less popular and valuable. Imported Sarus, Demoiselle, and Common Cranes are often offered ; White Asiatics are rare, while a fine pair of Black-necked and one Australian Crane figure in the Tokyo Zoo.

There are good collections of Pheasants in the zoos and some private aviaries, Golden, Amherst, Silver, Swinhoe's, and the native Versicolor

¹ More details on Japanese ornithology and aviculture will be found in *l'Oiseau*.

and Copper Pheasants¹ being the commonest. The Korean Ring-necked Pheasant is also very popular. Peafowl of different kinds are numerous. Among the rarer species Argus, Monauls, Crossoptilons, Germain's Polyplectron, and Elliott's Pheasants, Crestless, Noble, and Siamese Firebacks, Sonnerat's Junglefowls, and Cabot's Tragopans are kept in several collections, while a hen of the scarce Malayan Polyplectron lives in Mr. Okada's aviaries and some Mikado Pheasants at Dr. Kuroda's. Chinese and Formosan Bamboo Partridges (*Bambusicola thoracica*, *B. sonorivox*) are common, while Grey and Red-legged European Partridges are considered rare. Sand Grouse (*Syrhaphes*) are common, as are Chinese-painted Quails and Hemipodes; I also saw some Vulturine Guinea-fowls. Black Swans are the commonest of the group, Eastern Bewicks and Whoopers being also occasionally seen; the Mute Swan is a great rarity in Japan. Geese are scarce, the only common species being the Eastern varieties of the Bean and White-fronted and the wild Chinese Goose. Native Ducks, Mallards, Chinese Spotbills, Mandarins, Falcated, Shoveller, Pintails, Wigeon, Tufted, Baikal, and Common Teal are often kept, and also some other species imported from India. African and American Ducks are very scarce.

Some Pheasants, Partridges, Quails, and Ducks are reared every year, but it does not seem that, so far, the results have been nearly so good as in France or in England. However, more Japanese amateurs are now taking interest in those birds, and no doubt will soon breed them on a large scale.

Pigeons and Doves are not very numerous, but I have seen pairs of Jambu and other Fruit Pigeons, Nicobars and Crowned Pigeons of three species, Plumed Ground Doves, Green-winged and Bleeding Hearts, Diamond, Zebra, and Peaceful Doves, Crested Pigeons, and other commoner species. One bird dealer had a fine pair of *Gallicolumba stairrei* and a Japanese Green Pigeon.

There are many Parrots; a few Macaws and Cockatoos are kept in many private or public collections; among the Amazons, the Yellow-naped is considered the best, and many are to be seen. There are many

¹ They are three principal races of the Copper Pheasants: *Graphophasianus scammerringii scintillans*, *G. s. scammerringii*, and *G. s. iijimæ*.

Lories, more than in Europe, and numerous *Palæornis*. Australian Parrakeets are much appreciated ; I have seen all the more ordinary species, and among the rarest Swift, Barnard's, Many-coloured, Rock Peplars, Bourke's, and Elegant Grass Parrakeets.

Budgerigars have recently become very popular, even Green and Yellow fetching £1 a pair or more. Blue, Cobalt, and other rarer varieties are scarce and costly. Many are now reared in Japan.

Small birds, however, are the favourites with the Japanese, who can keep and breed them perhaps better than any other people. Both insectivorous and seed-eating birds seem to thrive as well, if not better than in any other country.

While many are housed in aviaries similar to ours, most are kept in cages. Japanese cages are simply wonderful ; whether they are open bamboo cages or breeding-box cages, they are always pretty and most beautifully constructed. In comparison, our best cages look desperately coarse, unfinished, and tasteless. It would need pages to give some idea of their beauty. Open bamboo cages generally rest on a pretty lacquered tray, from which they remain separated by a movable barred bottom. For each cage there is a special case, into which it can be put at night and when it is found necessary ; a wooden shutter and another one covered with thin paper allow of the cage being shut in with or without light. Feeding and drinking pots are of pretty ornamental china. The decoration of some cages is most luxurious, and I have seen wonderful ones, with gorgeous lacquered and other ornaments. The usual inmates of such cages are the lovely Loo-Choo and Japanese Robins, Blue Flycatchers (*Cyanoptila*), Zosterops, various Tits and Thrushes, Redstarts, Bush Warblers, Buntings, Orioles, Jays, and Magpies, etc. Higher cages are used for Larks. All these native birds are easily obtainable and commonly kept. Foreign birds are treated in the same way ; among them, many rare species from Formosa can be found. Malayan and Chinese birds are the most abundant on the market, where a good many South American and some East African birds can also be obtained. European, North American, and West African birds are extremely scarce.

Box cages of a special model are used as breeding cages for some kinds of seed-eaters, and prove most convenient for Canaries.

White Java Sparrows, Bengalese, all domesticated for many years, and also for the Australian Grass Finches. For the past few years their breeding has been undertaken most successfully. Hundreds of breeders exist nowadays all round the Tuner Sea, and especially in Osaka and around that great city. I have visited a score of such breeders, all of them being tradesmen, shopkeepers, etc., to whom bird breeding is a source of pleasure and profit.

Each breeding establishment consists of several hundred box-cages, arranged in four or five rows on the top of one another, under some small wooden hut or corridor with a glass front. Each cage is devoted to one pair of birds. Usually a breeder keeps some fifty pairs of Canaries and Java Sparrows and the same number of different Australian Finches, while 200 pairs of Bengalese are necessary. While Canaries and Javas reared their own progeny, all the eggs from the Australian Finches are given to the Bengalese, who hatch and rear them better, and being tamer, are much easier to handle. Also the rarer birds, not being allowed to sit, lay many more eggs all through the year, with the exception of the moulting time.

Gouldian, Long-tailed, Masked, Parson, Bichenos', and Cherry Finches are bred every year by the thousand. A man I visited in April had already reared 200 young Gouldians since the beginning of the year. Other species are much rarer or more difficult, but I have seen young Parrot Finches, Crimson and Rufous-tailed, reared in that way. In spite of the large number thus reared in Japan, Australian Finches still fetch very high prices, higher than ours, so great is the local demand. But there is little doubt that the ever-increasing production will bring prices down before long; then captive-bred birds, much stronger than wild caught ones, will be supplied to the European market by Japanese breeders. In the meantime, we really ought to try their methods, and increase in that way our own stock, as there is no doubt that their results are very much superior to those obtained in our aviaries with this group of birds. The uniform food supplied to seed-eaters consists of various seeds, green food, and a very good mixture, which I highly recommend; white millet immersed in raw yolk of egg, which all birds eat readily; it is very easy to make, and keeps for two days.

In Japan all insectivorous birds, native and foreign, are fed on the

same mixture, composed of ground husk of rice and rice itself, salad and fish meal. Prince Taka-Tsukasa gave us all details of it in his article, to which I refer our readers ; the percentage of fish meal only varies a little according to the more or less strict insect-eating habits of the birds. I sincerely believe that this food is the best of all such artificial foods, and is much more beneficial than any of our complicated mixtures of various insect-powders, etc., judging by the longevity and condition of Japanese cage-birds. One must bear in mind, of course, that no live insects are given in Japan, except in the case of moult or illness ; meal-worms are not obtainable. Consequently birds thrive on the artificial food, and on it only. I have actually seen large numbers of the most delicate native birds, such as Wrens, different Bush Warblers, Woodpeckers, Flycatchers, Cuckoos, Orioles, etc., fed in this way and looking in the pink of health, while I also watched several Birds of Paradise (King, Red, and Lesser), Tricoloured, Scarlet, and other Tanagers, various Sugar-birds and Honey-eaters, etc., in perfect condition, which never had been given any other food but this mixture, no fruit or insects whatsoever being put into their cages. Such results speak for the excellency of the food. It will be interesting to learn that ready made powder is now sold in Japan at a very reasonable price (a tin of about 1 litre for 35 sens, or 8*d.*) ; all there is to do is to moisten it. Japanese insectile food is usually given rather damp.

(To be continued.)

NOTES FROM CALIFORNIA

By J. C. EDWARDS, Los Angeles

Referring to the article in the June AVICULTURAL MAGAZINE on the breeding of the Abyssinian Lovebird in Germany, permit me to give my experiences with these and other birds on the west coast of the United States of America.

We received a dozen or more pairs of the first of these birds that came to New York, and of these we reserved six pairs for our own flights and sold the others to different fanciers. These birds have all been turned into aviaries with other birds, and so far none have bred except one pair obtained by Mrs. J. Bamfields, of Los Angeles, which laid four eggs in 1925, but reared only one youngster to maturity. In the

present year they laid four eggs, hatched three, but reared only two of these, which are doing nicely. These birds are apparently getting ready for a second attempt. The eggs were laid on a nest made of pieces of paper and canvas which they pulled off the front protection of their cage. This pair of birds are in an aviary with some softbills, and Mrs. Bamford reports that they partake greedily of the mealworms and gentles intended for the other birds, and believes that her success is partly due to this insect food.

With the six pairs retained we have had no results to date. We turned them into one of our large 20 ft. by 40 ft. aviaries, of which we have twelve, with Budgerigars, and they took possession of the nest-boxes at once, slept in them every night, but nothing doing as to nests or eggs. Thinking that they should be in separate pairs, we turned individual pairs into each aviary, again with Budgerigars. In 1925 prospects seemed good, and we had several nests with eggs, which, however, unfortunately never hatched. In 1926 we had four pairs alive, but as we had found that they interfered with the other birds more or less going into their nest-boxes, we are this season trying them in with twelve pairs of Cockatiels and two pairs of Redrumps in the same flight. We have found several eggs, but none hatched to date, 15th June.

I now believe that the failure is entirely our own fault; we go over all of our nest-boxes every two weeks so as to remove the soiled ones, infertile eggs, and dead birds, and it seems that these birds do not bear interference with their chosen box, and leave nest and eggs every time they are interfered with. However, we keep learning all the time, and in another year we shall try and have them in separate smaller aviaries, each pair by themselves, and so arranged that they will never be disturbed.

The Redrumps have done well so far, in spite of being in with all the Cockatiels. One pair has six matured youngsters from three broods, and is busy with the fourth batch. The second pair, obtained later, reared two in their first brood, and will probably rear another.

The Cockatiels are doing nicely, they are mostly 1925 youngsters, but of these several pairs reared young this season.

Of the six pairs of Nyasalands ordered, we received five pairs alive, and these also went with five pairs of the Grey-heads into one of the

large aviaries. These little Brick-heads are surely the most interesting of birds, they made themselves right at home, and when they saw the running water took to it at once and had a water and sunbath the first hour in their new home. The next thing that interested them seemed to be the nest-boxes, which they took to at once, as on the third day I noticed some of them carrying nesting material into them. They do not seem a bit particular as to nesting material, anything was welcome, strips of paper, string, straw, and feathers were used indiscriminately. As they have only been in the aviary two weeks it is too soon to expect more. One pair that we sold of a previous lot we had laid four eggs in the second week in their new home, but the female died egg-bound with the fifth effort.

The Grey-heads are not doing anything so far ; they seem just too busy watching the Nyasalands and wondering what is coming next. They have their eyes on anyone coming into the aviary, and are right there chattering away as if they meant to say " don't you dare to go near that nest-box ".

All of our birds are out of doors all the year, where they can suit themselves as to sunshine, shade, fresh running water, and almost everything else any bird may wish for.

The Red Rosellas of Mr. Henry Otto reared one brood in 1924, but did nothing in 1925 ; but this year they laid eight eggs, hatched four, and reared three to maturity, and are now getting ready for the second attempt. Mr. Otto also reared successfully a nest of four Long-tailed Grassfinches, the Red-eared Bulbuls have four eggs, and the hen of the Himalayan Robins is setting on five eggs.

Mr. Cosmos Morgan reports success with five nice Cordon Bleus, and Mrs. J. Keiser reared seventeen Gouldians from one pair during the past season.

Of course, there are any number of the lesser Finches, such as Zebras, Javas, and Mannikins, bred hereabouts more or less successfully. The great trouble with our aviculturists is that they try to keep too many birds in the same aviary. It is true they make quite a good show that way, but the mortality is always high and there are many disappointments which results in some of them giving up birds entirely. There must be hundred of aviaries in Southern California with no birds in them, just because they are too much trouble to keep alive.

NESTING OF WELLS' DOVE (*LEPTOPTILA*
WELLSI)

By HERBERT BRIGHT

About a couple of years ago Mr. Chapman sent me a pair of these very pretty Doves. I lost the hen during the winter, so was glad when I heard of another consignment being on the market—of these I secured four pairs and an odd bird, which turned out, fortunately, to be a hen. The birds were in very poor feather, some being nearly bare, and all had their primary flights broken or cut off. I put them all together in a small empty aviary to wait until they were able to fly properly and be turned out into more roomy quarters. It was some considerable time before they could do more than run about the floor, also they were very wild. However, eventually I picked out the best pair and turned them out into a large out-door aviary, where they soon improved still further, coming into lovely condition. It is a large aviary, and some time later I was tempted to turn out another pair, that were ready to go out, into the same aviary, with the unfortunate result that they were chased about and killed by the first pair before I fully realized what was going on. I left the original pair in this aviary all last summer. They kept out of sight, for the most part making no attempt to breed, until this spring, when they began inspecting the various nesting places. As so often happens they chose a very unsuitable one for these particular Doves, which are somewhat nervous and easily frightened off the nest. The nest was built in a holly-tree quite close to the outside walk, down which every one who wishes to go to the aviary either to see or to attend to the birds has to pass. Two eggs were laid, and they commenced to sit, but used to fly off when anyone went past. The hen was by far the worst and eventually she would not go back one evening, though the cock continued to sit all the night. Next morning, unfortunately, I found the nest deserted, and the eggs cold. The birds soon started looking for a fresh nesting site, and again selected a most unsuitable one. I did not wish to lose a second pair of eggs from the same cause, so determined to risk driving them away before the eggs were laid by fixing a substantial screen of yew branches on two sides of the nest. This was quite effectual. The birds sat closely and never moved from the nest.

One young one was hatched and attended to by both parents almost night and day, the cock and hen frequently being on the nest together, and sleeping there at night. The young one was well reared, and did not leave the nest until it was well able to fly. The first night it roosted on a tree near the nest beside the cock bird, but afterwards by itself. The only fact worth noting specially is that the old birds seemed greedy for mealworms when feeding and also ate gentles. I have never seen them eat them previously, though they may have done so. The young bird is very similar to its parents, except that it is a darker brown on the body, and the face and breast are also darker. I turned out a second pair into a good-sized aviary, which contained a pair of Monaul Pheasants; they have also nested and I think have young ones a few days' old, though I have not actually been in to examine the nest. In each case they have used an artificial nest and added some small sticks, hay, and a few bits of straw. I have not found them troublesome with other Doves, of which there are a good number in each of the aviaries where they are breeding. I give Dr. Butler's description of them, but would like to say that the difference between the sexes in colour is very slight, but the hen has a decidedly smaller head. I had no trouble in picking out two pairs to send away to a friend, and I correctly sexed the pairs I selected for my own breeding.

DESCRIPTION

The adult has the upper surface of a brownish-olive tint; the forehead pinky-white, shading into grey on the crown; back of head and nape dark olivaceous-brown, washed with purple; flights brown, the inner webs cinnamon; tail olive-brown, the shafts of the feathers blackish, the outer feathers darker and tipped with white; chin and upper throat white; cheeks, lower throat, and breast dull vinous; chest, abdomen, and under tail-coverts white, the last slightly tinged on the outer webs with brown; sides, brown; axillaries and under wing-coverts, cinnamon; feet, crimson; bill, black; naked skin round eye, blue; iris, brown (?). The female is very similar, the forehead less white, and the colouring generally, perhaps, a trifle duller. Hab., Island of Tobago, West Indies.

THE BREEDING OF GRAYSON'S DOVE

By HERBERT BRIGHT

Towards the end of last summer I received from a friend four examples of *Zenaidura graysoni*. They were young birds not fully in adult plumage, but otherwise in excellent condition, so after ten days rest I turned them all out into a large out-door aviary as the weather was warm and fine. They enjoyed the liberty and ate quite a lot of green food (privet leaves, grass, etc.). I eventually lost one hen from this cause. It must have eaten some poisonous weed, as it died some months later from intestinal inflammation, which had been going on some time. I soon found out I had only one male and three females and all the hens seemed inclined to go to nest; so I selected the best one and removed the other two hens. The pair I left soon started to make a nest on an old basket nest foundation. Two eggs were laid and the birds sat steadily; they were very tame, and I had great hopes of a successful result, but unfortunately they left the eggs just when they were hatching. Both eggs were fertile, and the shells were chipped, but quite cold. As the weather had turned much colder, I decided not to risk another nest though they started building a fresh one almost immediately. I took them inside and kept them in during the winter. In the spring they started to build in the indoor aviary, which is a warm one; so I let them continue. However, I nearly lost the hen when she laid, owing to egg binding. I then took her away, and put in another hen, which went to nest, laid, and failed as before to hatch. Later I turned out the original pair, and they proceeded to nest at once, but again the eggs, which in every case were fertile, failed to hatch. I began to wonder if I should ever breed them, but the last attempt has been fully successful, and I have two strong healthy young ones fully reared, and the pair are sitting again in the same nest. The young were reared in a small basket nest fixed up under the overhanging roof of an out-door shelter shed in the large aviary. They were, of course, well sheltered in this position from all rain, and largely from wind. The old birds looked after their young very well, and drove away any other doves that came near when they left the nest. The first few days they wandered about on the ground, and found their way inside the

shelter-shed and slept on the dry leaves, etc., which cover the floor. I think this probably helped in the rearing of them, as they had a dry, warm bed at night. I noticed the old birds ate freely of gentles when rearing their young. The young resemble their parents to a large extent, except that they are darker brown, and there are more smoky black markings on the sides of the wings, almost amounting to a bar. The eye is dark, and the mandibles brown to black. They are undoubtedly a true pair, as the cock shows decidedly more cinnamon on the breast and is slightly larger, though there is but little difference in the size. I found these doves quite good-tempered with the numerous other doves in the aviary, but, as frequently is the case, they dislike any others of the same species, and used to chase an odd hen about, so I removed her. I shall certainly not leave the two young ones very much longer in the same aviary. I have seen both the young ones in the large bird house feeding, and expect to have no further trouble with them.

Zenaidura graysoni inhabits Socorro Island, and may be described as follows :—

Upper parts brown ; sides of the neck with a patch of metallic coppery red ; a black spot below the ear-coverts ; the inner upper wing-coverts, some of the scapulars and inner secondaries with black spots ; occiput dark grey ; forehead, sides of the head, throat, and lower parts rufous cinnamon ; sides, axillaries, and under wing-coverts grey ; quills brown ; two central tail-feathers brown, the lateral ones grey, with the basal portion of the outer web brown, the outer one has also the outer web grey ; all the lateral feathers have the apical portion grey and an irregular black band between it and the basal portion : “ bill black ; iris, feet, and legs red.”

AVICULTURAL NOTES

By the EDITOR

Messrs. Chapman received another large consignment of Lovebirds early in July from Northern Rhodesia, consisting of Black-cheeks (*Agapornis nigrigenis*) and Nyasas (*A. lilianæ*), and a number which were without doubt hybrids between these two species. They are

identical with *A. lilianæ*, with the exception that their cheeks are blackish, some specimens showing this peculiarity very clearly, while others possess a mere dusky shade on the cheeks. The two species apparently meet on the border of Northern Rhodesia and Nyasaland, and these dark-faced birds are clear evidence that the two hybridize in their natural state, the hybrids being doubtless fertile.

Dr. Amsler pointed out in our May number that these two species are closely allied, an observation that has been confirmed by the very interesting discovery of wild hybrids being produced. Such hybrids are extremely rare in nature, and where these do occur and prove to be fertile, such fertility seems to be evidence of the two being not distinct species but races of one and the same species, but the question as to what is and what is not a species is a difficult one.

It may be said that there is no evidence that these hybrids will prove to be fertile, but the fact that many of these birds showed very little trace of the dark colouring on the cheeks points to their not all being of the first cross, but some being the progeny of hybrids mated with pure Nyasas.

The Zoological Society has received from the Sudan three examples of the Shoebill (*Baleniceps rex*), one of the most extraordinary birds in existence. Its home is on the banks of the White Nile and its tributaries from Khartoum to the Great Lakes. It has been called the Whale-headed Stork, though it is probably really a very specialized Heron with an enormously broad and powerful bill, the precise purpose of which is somewhat obscure, though we know that fish of some kind forms its principal diet.

M. Delacour's article on *Japanese Aviculture* will be read with the greatest interest by British Aviculturists, who may gather from it some very useful hints. We always knew that the Japanese were very clever people, but we now learn that through their cleverness we shall soon have intensively bred Gouldians and other rare and delicate species sent over here with a guarantee that they have been "manufactured in Japan". And they are doing it by utilizing their new product, the

Bengalese, as foster-parents in the same way as we use broody hens for rearing young pheasants.

The Bengalese is rarely imported nowadays, possibly because it is proving so useful in Japan, but at one time it was one of the commonest of our aviary birds, but though we had the chance then of putting it to a very practical use we failed to do so because we failed to recognize its capabilities.

The use of fish-meal as a food for cage and aviary birds has never been fully recognized by us over here. It is largely used for feeding laying hens, and also for turning pigs into prime bacon, and is a cheap and economical food. We may surely take a hint from our Japanese friends as to its value as a bird food.

The price of Blue and other abnormally coloured Budgerigars has sailed up to about three times the amount it was a year ago, and the reason of this appears to be that the Japanese have recognized the value of these birds as a commercial proposition, and have purchased every one they could secure. We shall soon hear of their being bred in thousands in Japan.

But we must not let our friends have it all their own way. In the Blue Budgerigar in all its shades, we have a really good thing, and we may as well make the best of it ourselves and not let all our best birds go out of the country.

The extremely interesting sight of Sarus Cranes in full flight may be witnessed almost any day in the neighbourhood of Weybridge, Surrey, the birds belonging to Mr. Ezra's fine collection at Foxwarren Park, where there is a small flock of them, two of which have full powers of flight which they make full use of. Ascending in wide circles, they may be watched until they almost disappear from sight, to such an altitude do they attain; and when they appear to be mere specks in the sky, they may be heard trumpeting to their companions below.

To watch them planing down in wide circles and finally landing amongst their companions is a sight not readily to be forgotten.

A very beautiful example of lutanism is that of a Fruit Pigeon that has recently been added to Mr. Ezra's collection. It belongs apparently to the species known as the Southern Fruit Pigeon, *Crocopus chlorogaster*, which, in its normal dress, is mostly leaf-green. Mr. Ezra's bird is of a beautiful golden yellow, reminding one somewhat of the lovely golden Fruit Pigeons that inhabit Fiji.

We hope that our members will not fail, each and all, to procure from our publishers a copy of the first volume of *Aviculture*, which will be found to be a most useful book to all who keep birds. Both letterpress and illustrations are excellent, and each member who purchases a copy not only secures a valuable possession, but also benefits the Society.

MR. FINN'S POEMS

Mr. Frank Finn is well known to our readers as a very experienced naturalist, and it may be news to some that he is also a poet of no mean ability, and his small volume entitled *The Masque Birds and other Poems*,¹ will be welcomed by those who are fond both of poetry and of birds.

In order that our readers may judge of the fine quality of Mr. Finn's poetry, inspired as it is by a love of Nature, we may quote the following verses :—

“Great is the power of poetry ;
It bids the sad from tears refrain,
Sheds slumber on the restless brain,
Eases the sick on beds of pain,
Cheers the lone sailor on the main,
And to the mourner brings again
The thrill of love's idolatry.”

And of the Oriole :—

“Gold is my voice and gold my plume :
Amid the wild wood's leafy gloom,
Where she I love sits all unseen,
Clad like the sweet surrounding green,
I fly, and sing, and fly again,
And tell her all my lover's pain,
Ringling her round with golden rain ;

¹ Published by Selwyn and Blount, Ltd., 21 York Buildings, Adelphi, W.C. 2..
Price 3s. 6d. net.

While she to me in shy surprise
Turns rosy bill and ruby eyes.
Then should at last we wedded be,
Each year she grows more like to me."

CORRESPONDENCE

SPECIES NEW TO AVICULTURE

SIR,—Dr. Hopkinson's letter in the AVICULTURAL MAGAZINE for June, 1926, asking for information concerning various genera of *Fringillidæ* which may have been kept in captivity, has caused me to check through the records of arrivals at the New York Zoological Park. I realize that importations to Europe are of chief importance to most readers of the AVICULTURAL MAGAZINE, but I send the following notes on Dr. Hopkinson's inquiries, in case they may be of interest.

Two specimens of the Japanese Grey Bunting (*Emberiza (Tisa) variabilis*), were received on 4th July, 1913. These birds were brought to America from Japan by Mr. K. V. Painter, a member of the Avicultural Society and presented to the New York Zoological Park.

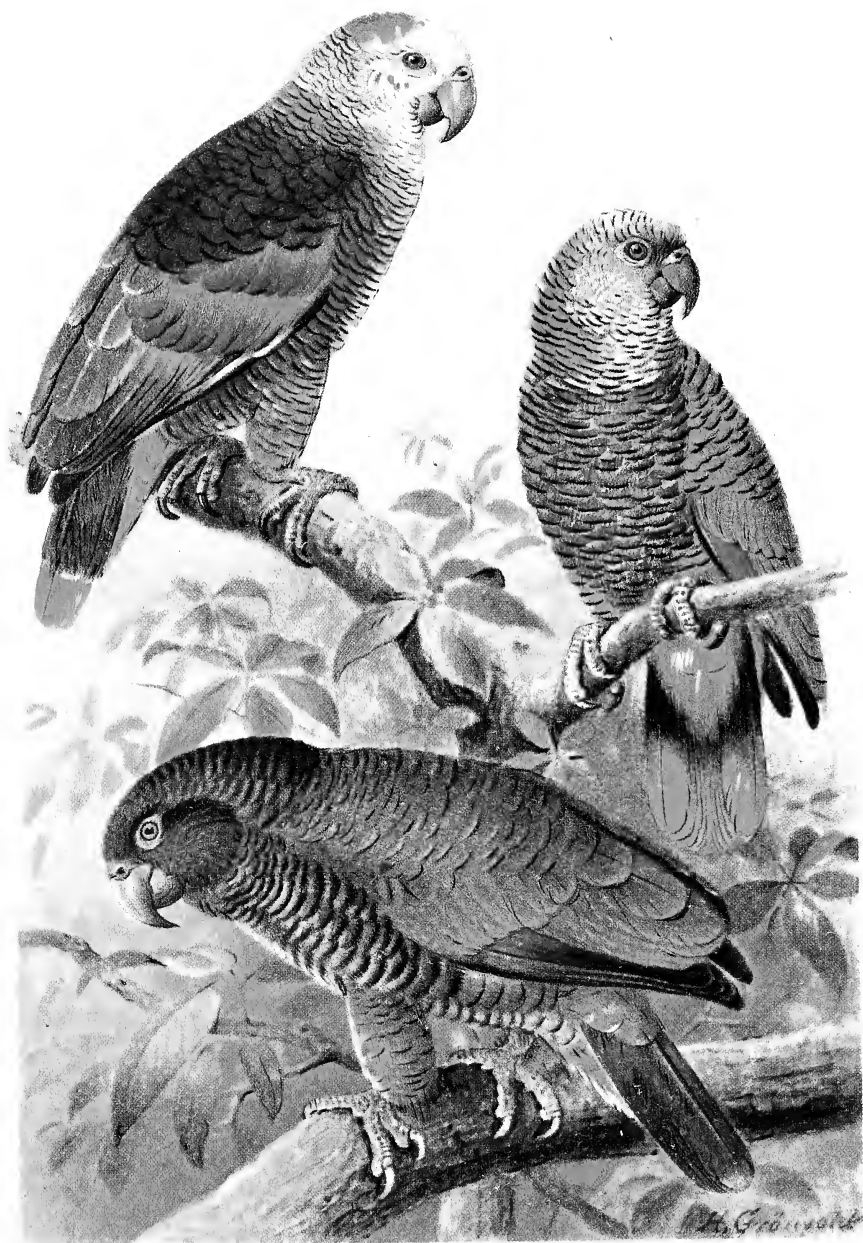
The Green-tailed Towhee (*Oreospiza chlorura*) has been represented in our collection by a total of sixteen specimens, the first of which was received in September, 1910. Two birds of this species were sent in exchange to the Zoological Society of London in October, 1910, but whether or not they arrived safely I do not remember.

In the course of years we have had three forms of *Arremonops*: Schott's Sparrow (*A. verticalis*), Lafresnaye's Sparrow (*A. conirostris conirostris*), and Richmond's Sparrow (*A. c. richmondi*).

At the present time we have a single specimen of the White-naped Sparrow (*Atlapetes albinucha*), received 28th October, 1924. This is a charming species, which should be better known to aviculturists.

The Brown-capped Grey Tanager (*Schistochlamys capistrata*) was fairly common in the American market at one time, though it has recently become scarce. We have had a total of seven specimens, the first of which was received in August, 1915. Dr. Hopkinson included this genus in his list through inadvertence no doubt, as it is commonly assigned to the *Tanagridæ*.

LEE S. CRANDALL.



1/5

John Bale Sotus & Danieisson Ltd

Guilding's Amazon,
(Amazona guildingi).

Blue-faced Amazon,
(A. versicolor).

Imperial Amazon,
(A. imperialis).

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We have received during the month of June magnificent collections of Birds from Abyssinia, Australia, India, Mexico, and South Africa, and we think we are quite safe in saying that there have never been such large and splendid collections of Birds to be seen under the same roof before, not only in England but throughout the entire world, and a visit to our premises cannot possibly fail to be of great interest to those interested in living Birds.

Perhaps one of the most popular of the Birds which we have recently received is the **Black-cheeked Lovebirds**, one of the most desirable of this charming family, and all interested in a pair or pairs of these most rare and attractive species should not fail to advise us early.

It may be of interest to Aviculturists to hear that before these Birds had been in England for a week at least 3 pairs were reported to us as having commenced breeding operations.

Below we give a resumé of the more interesting Birds which we have in stock at the moment, but this list is, owing to the lack of space, by no means complete, and all are recommended to write for a copy of our Monthly Notes and current Price List:—

ABYSSINIAN BIRDS.—Royal Starlings, Spreo Starlings, Blue Rollers, Pigmy Owls, Pigmy Falcon, Donaldson's and White-breasted Touracos, Coolie Birds, Sun Birds.

AUSTRALIAN BIRDS.—Galahs, Black Cockatoo, Blue Mountain Lories or Swainson's Lorikeets, Rozella Parrakeets, Stanley Parrakeets, Adelaide Parrakeets, Rock Peblers, King Parrots, Red Rumps, etc. Two of our Collectors arrive from Australia in the middle of July with a very fine collection which cannot fail to be of great interest to all.

INDIAN BIRDS.—Blue-winged Sivas, Shamas, Dama Thrushes, Tits, Various Bulbuls, Black-headed Sibias, Silver-eared Mesias, Barbets, Blue Verditer Flycatchers, Rock Mynahs, Scimitar, etc., Babblers, Orioles, Rufus-bellied Niltavas, White-crested, Laughing Crested Jay Thrushes, Robins, etc., etc.

MEXICAN BIRDS.—A magnificent collection of Rainbow Buntings, Nonpareil Buntings, Indigo Blue Buntings, Grey Mocking Birds, Blue Mocking Birds, Yellow-winged Sugar Birds, Mexican Parotlets, Waxwings or Cedar Birds, Virginian Scarlet Cardinals, Cocks and Hens, etc., etc.

It may be of interest also to Aviculturists to hear that we were successful in landing 4 magnificent specimens of 3 different species of HUMMING BIRDS in perfect health and condition which are now in the possession of one of our foremost Aviculturists.

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THE AVICULTURAL MAGAZINE

BEING THE JOURNAL OF
THE AVICULTURAL SOCIETY
FOR THE STUDY OF
FOREIGN & BRITISH BIRDS
IN FREEDOM & CAPTIVITY

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AMAZON PARROTS

By E. MAUD KNOBEL, F.Z.S., M.B.O.U.

(Concluded from p. 213)

I conclude my account of this group of New World Parrots with a list and short description of the different species :—

GUILDING'S PARROT (*Amazona guildingi*).—This Parrot is exceedingly rare, in fact a short time ago it was thought to be extinct, but a few examples are known to have survived, and we now see a very good specimen in the parrot house at the Zoo. It is a large and magnificent bird, and its plumage is a rich mixture of yellow, brown, orange, and blue ; beak white. *Habitat*, St. Vincent.

The IMPERIAL PARROT (*A. imperialis*), like the preceding one, is another of the largest and most beautiful of its type. Also thought to be almost extinct, but two years ago the Zoo were fortunate enough to procure a specimen. The back is green, but the head, neck, and breast are a wonderful dark purply red, the collar being almost black purple ; beak horn brown. This Parrot was formerly known as the "August" Parrot, *Amazona (Chrysotis) augusta*. *Habitat*, the Island of Dominica.

The ST. LUCIA PARROT (*A. versicolor*) is another rare bird ; green, with a blue head and salmon pink breast ; beak black with a light yellow spot. *Habitat*, the Island of St. Lucia.

BOUQUET'S PARROT (*A. bouqueti*).—Another of the big Amazons.

Green with a blue head, and bright red on the upper breast ; beak, yellow-white. *Habitat*, Dominica.

The VINACEOUS PARROT (*A. vinacea*) is much smaller than any of the preceding. Green, with a red band on the forehead and lores, red also in the tail and wings, and the breast wine colour ; beak, red with a yellow tip. *Habitat*, S.E. Brazil and Paraguay.

The GUATEMALA PARROT (*A. guatemalæ*).—A large green bird with the top of the head blue ; beak, horn colour. *Habitat*, Central America.

The GREEN-HEADED PARROT (*A. virenticeps*).—Another big bird very much like *guatemalæ*, but the blue on the head is more restricted, and is only on the forehead and lores ; beak, horn colour. *Habitat*, Costa Rica.

The MEALY PARROT (*A. farinosa*).—A large green bird with a yellow orange mark on its head which merges into purple black on the nape. The plumage has the appearance of being covered with fine white dust, giving it the name of “ Mealy ” ; beak, white. *Habitat*, British Guiana.

The PLAIN-COLOURED PARROT (*A. inornata*).—It is green all over with slight purple on the nape of the neck. There is red in the wings, but not in the tail ; beak, white horn. *Habitat*, Ecuador.

The MERCENARIA PARROT (*A. mercenaria*).—A much smaller Parrot, dark green above, light green below, red in the wings and tail, and yellow on the edge of the wing ; beak, black with a yellow spot. *Habitat*, Colombia and Ecuador.

The BLUE-FRONTED PARROT (*A. aestiva*).—These are the most frequently imported, they make very good talkers, and are lively and amusing in their ways, and can be thoroughly recommended as pets. Green with a blue forehead, head, cheeks, and neck yellow, but this may vary very much, and I have seen some Blue-fronts showing no yellow and others no blue. There is red in the wing and tail ; beak, black. *Habitat*, Brazil.

The ORANGE-WINGED PARROT (*A. amazonica*).—Green with the forehead blue, crown and lores yellow, orange in the wing and tail ; beak, black yellow. *Habitat*, Colombia.

The YELLOW-SHOULDERED PARROT (*A. ochroptera*) is a very pretty Parrot. Green, with the head and top of the shoulders yellow, red in the wing ; beak, white. *Habitat*, Venezuela.

ROTHSCHILD'S PARROT (*A. rothschildi*).—Very much like the preceding species, but with the yellow on the head and shoulder more restricted. *Habitat*, Bonaire Island.

The YELLOW-FRONTED PARROT (*A. ochrocephala*).—Green, yellow on the forehead, red in the wings and tail; beak, black with a pink or yellow spot near the base. *Habitat*, Venezuela.

The PANAMA PARROT (*A. panamensis*).—Very like the preceding one, but smaller with less yellow on the head and beak entirely white. This and the Yellow-fronted make very good all-round talkers. *Habitat*, Colombia and Panama.

The YELLOW-NAPED PARROT (*A. auripalliata*).—Green, with a yellow collar, red in the wings and tail; beak, black. Most of the birds that come over here are young showing no yellow collar which they do not acquire for some years. They are most desirable and talented birds, but delicate when first imported. *Habitat*, Western Mexico to Costa Rica.

LEVAILLANT'S OR DOUBLE-FRONTED PARROT (*A. levaillanti*).—A large handsome bird, green, with the head and neck yellow, a large splash of red or yellow on the top of the wing, and red in the wings and tail; beak, white. Some of these make wonderful talkers, but are very nervous birds when first they come over. *Habitat*, Mexico.

NATTERER'S PARROT (*A. nattereri*) resembles *A. farinosa*, but has blue on the front and round the eyes. Very rare. *Habitat*, Brazil.

DUFRESNE'S PARROT (*A. dufresneana*).—A large green bird with an orange forehead, blue cheeks, orange in the wings and tail; beak, white with a pink spot. *Habitat*, Guiana.

RED-TOPPED PARROT (*A. rhodocarytha*) differs from *A. dufresneana* in having red on the top of its head instead of green, the lores are yellow, and the cheeks and throat blue; beak, yellow horn with a red spot. *Habitat*, South-East Brazil.

The GREEN-CHEEKED PARROT (*A. viridigena*).—Green, with the front, lores, and crown red. A blue violet band runs from the eye to the side of the neck; beak, white. *Habitat*, East Mexico.

FINSCH'S PARROT (*A. finschi*) is a Parrot of medium size, green, with the forehead and lores deep red, the crown pale purple, the feathers on the breast are green edged with black; beak, white. *Habitat*, West Mexico.

The **DIADEMED PARROT** (*A. diademata*) differs from the preceding one in having a small spot of dark purple on the crown, the nape of the neck has also a deep purple band, lores and forehead with a red band, a red spot on the chin; upper beak whitish, lower mandible black. *Habitat*, Brazil.

SALVIN'S PARROT (*A. salvini*) differs from the last in having pale lilac colour all over the top of the head and neck, lores crimson, sometimes a yellow streak under the eye; beak, white horn. *Habitat*, the Orinoco to the Amazon.

LESSON'S PARROT (*A. lilacina*) is another closely allied species, but a very much smaller Parrot, frontal band and lores red, crown of the head lilac mixed with red, cheeks bright light green; beak, black. *Habitat*, Ecuador.

The **YELLOW-CHEEKED PARROT** (*A. autumnalis*).—Green, the frontal band and lores red, crown violet, cheeks yellow, a red spot on the chin; beak, yellow horn. *Habitat*, Mexico.

The **YELLOW-CROWNED PARROT** (*A. xanthops*).—A small Parrot, dark green with the crown of the head and cheeks yellow, inclining to orange. A yellow band across the abdomen; beak, white with a black ridge running down the upper mandible. *Habitat*, Central Brazil.

The **BLUE-FACED OR RED-TAILED PARROT** (*A. braziliensis*) is a fairly large Parrot, green edged with black, the frontal band and crown pinky red, cheeks bright violet blue, red in the tail with the outer feathers purple blue, underneath carmine; beak, light brown. *Habitat*, Brazil.

BODINI'S PARROT (*A. bodini*).—Green, with the frontal band red ear coverts purple blue, the rump scarlet; beak, black. *Habitat*, Venezuela.

HAGENBECK'S PARROT (*A. hagenbecki*) is also closely related.

The **FESTIVE PARROT** (*A. festiva*).—Green, with a narrow frontal band of red, blue round the eye and on the throat, rump scarlet, wings a lovely blue; beak, horn black. *Habitat*, East Peru.

The **GREEN-RUMPED PARROT** (*A. chloronota*) differs from *festiva* in having the rump green; beak, dark brown. *Habitat*, the Amazon Valley.

The **RED-FRONTED PARROT** (*A. vittata*), one of the smaller Parrots.

Green, with a narrow frontal band of scarlet. The plumage is dark myrtle green, each feather edged with black; beak, white. *Habitat*, Porto Rica.

PRETRE'S PARROT (*A. pretrei*) is a gawdy bird of green with splashes of red on the forehead, crown, and under the eye. A large splash of red on the top of the shoulder and down the wing and thighs; beak, orange yellow. *Habitat*, East Brazil.

The TUCUMAN PARROT (*A. tucumana*) differs from the preceding by showing much less red. It is smaller, with the forehead red, and has yellow and red round the ankles; beak, white. *Habitat*, Tucuman, Argentina.

THE SPECTACLED PARROT (*A. albifrons*).—A small Parrot, green with a white front, blue on the top of the head, red round the eyes, and a large splash of red down the wing; beak, yellow. *Habitat*, Central America.

THE YELLOW-LORED PARROT (*A. xanthlora*), the smallest and one of the most beautiful of all the Amazon Parrots. Green, with a white forehead merging into blue on the crown of the head, lores yellow, red round the eye, ear coverts black, red on the top of the shoulder; beak, yellow. *Habitat*, Yucatan.

SALLE'S PARROT (*A. ventralis*).—A small dark green Parrot, with white forehead and lores, ear coverts black; the abdomen has a patch of red; beak, white. *Habitat*, San Domingo.

WHITE-FRONTED PARROT (*A. leucocephala*).—The plumage is bronzy green with the front and crown of the head white, ear coverts black, the cheeks and throat and top of the breast are salmon pink; beak, white. *Habitat*, Cuba.

THE CAYMAN PARROT (*A. caymenensis*) is very much like the preceding species, but the salmon pink is a deeper colour and more extended down the breast; beak, white.

THE BAHAMA PARROT (*A. bahamensis*).—Also very like the two previous Parrots, but is a very beautiful bird. Green, each feather edged with black, white on the head and round the eyes, cheeks and breast salmon pink; beak, white.

THE JAMAICA PARROT (*A. agilis*).—A small Parrot, green all over with red in the wings and tail; beak, horn brown.

The RED-THROATED PARROT (*A. collaria*).—Another of the small specimens and very beautiful, green with the forehead white, merging into pale blue, pale blue under the eye and the throat and upper breast pale pink, ear coverts black; beak, white, yellow at the base. *Habitat*, Jamaica.

FURTHER NOTES ON RHODESIAN BIRDS

By SYDNEY PORTER

The Capped Wheatear (*Saxicola pileata*) is an extremely common bird in Rhodesia, especially around Salisbury, where it is usually to be seen flying from one small ant hill to another on the bare stretches of land around the town. It at once attracts attention by its conspicuous plumage, which is a mixture of black, white, and chestnut.

In the other parts of Rhodesia this bird seems to prefer the sparsely covered bush veldt, for one never sees it on the wooded veldt. In the districts where these birds are numerous the ant hills are quite white with their droppings.

They feed upon ants, grasshoppers, etc., in fact, any small insects which they may find.

The Red-eyed Dove (*Turtur semitorquatus*) is exceedingly abundant in the wooded districts of Rhodesia. It is very much like a large edition of the Cape Turtle Dove (*Turtur capicola*), but is somewhat darker in hue. It is usually seen about in pairs, but in districts where it is not disturbed or shot it is found in large flocks feeding upon the ground around the old Kaffir kraals and lands. When disturbed it rises with a heavy clattering flight and seeks shelter in the nearest tree. It seldom wanders far from its feeding grounds.

The Red-eyed Dove loves to get into a thick shady tree during the heat of the day, and there it utters its loud but by no means unpleasant "coo" and chases its companions from branch to branch.

It nests in the high trees, making the merest apology for a nest, scarcely more than a dozen or so fine twigs, on which it lays its two glossy white eggs.

The large and handsome South African Stone Curlew or Thicknee (*Œdicnemus capensis*) or Dikkop, as it is known to the Rhodesians,

is found rather sparingly in Rhodesia on the open veldt or in other places destitute of trees.

It can run with great speed, but is singularly confiding; when approached it will run round a pile of stones or an ant hill and wait, and if one attempts to follow it up it will just play a game of "hide and seek" with one. Its large soft brown eyes at once attract attention.

This bird's presence is greatly esteemed by the farmers and planters, especially when amongst the tobacco, owing to the fact that it consumes great quantities of insect pests. I have frequently seen it in the tobacco lands running up and down the rows of plants looking for insects.

The charming little Blue-breasted Waxbill (*Estrelda angolensis*) takes the same place in Rhodesia as the Sparrow does at home. It is found all the year round in small parties around the homesteads, farm buildings, and cattle kraals. Tame, gentle and confiding, it is encouraged by all except a few brutal white boys who find pleasure in slaughtering it with air guns. Its melodious "ting-ting" is heard the whole day long in the gardens and plantations. If one throws a handful of mealie-meal a yard or so from where one is sitting these beautiful little birds will flock around to pick it up. The nest, which I have often found in lemon-trees, looks like a ball of fine grass; it is composed of fine flowering grass heads, the entrance being at the side. The tiny eggs are white in colour.

Tits are rare birds in Rhodesia; the only one I came across was the Grey Tit (*Parus afer*). It is found either singly or in pairs about the plantations and its habits seem to differ very slightly from those of the other Tits.

The beautifully coloured Half-collared Kingfisher (*Alcedo semitorquata*) seems to be the African representative of the European Kingfisher, a bird which it resembles both in size and colour. It was exceedingly common by the Umsururu River, near where I stayed, where one could see it perched on an overhanging reed or branch quietly waiting for some stray fish to pass underneath. If one happened to be in a canoe the bird appeared to be entirely indifferent to one's presence, and it was an easy matter to watch these birds fishing only a yard away from one; they seldom flew away until one was close enough to touch them.

I once saw three of these birds on a reed stem having a whistling contest, all three were whistling with great gusto and trying to outdo the others. They were sitting perfectly upright with their beaks pointing to the sky and their stumpy tails moving up and down at a great rate. The song was sustained and quite sweet, and until then I never knew Kingfishers sang.

The Black-bellied Knorhaan or Bustard (*Otis melanogaster*) is the common Knorhaan of Mashonaland, it inhabits the sparsely wooded veldt, but is especially partial to the old cultivated lands. It lives in a solitary condition, and owing to the height of the grass is seldom seen unless put up by dogs or disturbed as one walks through; it then flies up and sails along with leisurely wing beats, looking more or less like a huge black and white butterfly rather than a bird; it flies for a mile or so before it settles, and then runs with great speed.

The general colour above is a sandy rufous, the feathers being finely vermiculated, the downy part of the feathers being pink; the wing feathers are most beautifully marked and resemble those of the Sun-bittern; the under parts in the male are black, in the female sandy. The plumage of these birds harmonizes so well with their surroundings that it is almost impossible to see them even when at quite close quarters.

All the Knorhaans, fourteen of which inhabit South Africa and Rhodesia, are essentially birds of the great open spaces of Africa, roaming many hundreds of miles over the veldt, seldom in one place for any length of time except in the breeding season, feeding upon all manner of insects, seeds, etc., and like all the other members of the Bustard family making no nest, merely laying their dark, mottled eggs in a scrape on the ground under the shelter of a tussock of grass.

These birds seem to be troubled with ticks (one of the curses of Africa), and I have frequently seen them about the birds' heads; one bird which I saw had a huge tick the size of a bean adhering to it just below the eye.

The Knorhaans have remarkably large eyes, which are usually dark brown, this gives them a particularly soft and gentle expression.

Of the numerous Larks which inhabit the grass veldt the Rufous-naped (*Mirafra africana*) and the Red-capped (*Tephrocorys*) are the

commonest. They are usually seen on the tops of ant hills singing their rather monotonous song. There is one kind of Lark (I have never been able to make out the species) which at certain times of the year soars to a great height and claps its wings with loud resounding claps; while going through this extraordinary performance the bird remains stationary for several seconds in the air.

The beautiful Orange-throated Lark (*Macronyx capensis*), perhaps the most beautiful of all the Larks, is very common on the open veldt. In colour it is the usual lark brown above, the lesser wing-coverts edged with orange and the primary wing feathers with yellow, the throat is bright orange red, the rest of the under parts clear orange yellow, the red throat is bordered by a thin black line. The female is duller in colour.

The habits of this handsome Lark seem to differ but slightly from those of the rest of the family, except that it is very fond of perching on the trees, when disturbed it flies to the topmost branch of a high tree and there remains motionless. It also utters its song from the top of a tree.

There are numerous Owls in Rhodesia, the most noticeable of all being the Spotted Eagle Owl (*Bubo maculosus*). This bird is found in solitary state around the wooded kopjes, it seldom if ever flies abroad in the daytime unless it is disturbed in its retreat, when it flies from tree to tree, turning round as soon as it alights and blinking at one in such a manner as would lead one to suppose that its powers of sight in the daytime were very limited indeed.

This large Owl makes its nest, or rather I should say lays its two white eggs, on the ground in a slight depression and when the young are hatched it is extremely bold in their defence, and will take to subterfuge to lure the intruder away from the nest; usually one of the parent birds will flutter on the ground as though in its last throes, rolling over, lying with outstretched wings and screaming, in fact, the performance is so realistic that one half wonders whether the bird really is wounded.

The Marsh Owl (*Asio capensis*) is found, as its name implies, in the low-lying marshy districts, where one often puts it up out of the long grass or reeds.

It seems to spend most of the day sleeping in a kind of a nest by a tussock of grass and sallies forth at the approach of dusk in search of its prey. When disturbed this bird has a habit of flying very slowly away and keeping its eyes all the time fixed upon one ; I have seen these birds literally flying with their heads turned completely round and with an expression on their faces which conveyed far more eloquently than words their utter contempt for me.

I had a young bird of this species, but it was terribly fierce, and as it would not eat we had to cram it, which was by no means a pleasant job. One night it broke the door of its cage and escaped ; I was not sorry to see the last of it.

Woodford's Owl (*Syrnium woodfordi*) is also a lover of the open spaces on the veldt, and like the Marsh Owl is frequently put up out of the thick grass. It is very handsome and far from common anywhere in Africa.

The Cape Barn Owl (*Strix flammea*) is the commonest of all the owls, and is usually especially numerous around the farm buildings. One of these birds used to come every night to a box that was fixed on to a stable wall for the use of pigeons, and there it would hammer with its beak on the box for hours at a time, and although I often watched it I could never find a reason for this strange behaviour.

The Cape Barn Owl is very much like its European cousin, but it is slightly darker. It combines with the Jackals to break the peace of the still tropical nights with its horribly raucous voice.

At certain times of the year the Eastern Red-legged Kestrel (*Tinnunculus amurensis*) is exceedingly common, and is seen in flocks of thousands. It is an inhabitant of the Far East, Japan, and China, and it migrates to South Africa during the Northern Winter. Its appearances are exceedingly erratic : it will appear in tens of thousands one day, and not a single individual will be seen the next ; sometimes a flock will take several hours to pass over a certain given spot.

It hawks for its prey in the air very much after the manner of a Swallow, and at certain times of the day great flocks of these birds can be seen at a great height in the air feeding principally upon locusts and flying ants, which it catches with its feet. If there is a swarm of flying ants anywhere the Kestrels are sure to be there,

continually dashing through the swarm and capturing an insect each time. At other times if there are no flying ants or locusts in the vicinity the birds will sweep low over the mealie fields, taking any kind of insect that is to be found.

These lovely Hawks seem to have certain times for resting, principally in the afternoon, when a flock will roost *en masse* on the top-most branches of tall trees, usually dead ones.

The value of these birds to the farmers and planters is inestimable, for the number of insects which they consume must be enormous.

The Larger Kestrel (*Tinnunculus rupicoloides*) is a resident, and is fairly common on the wooded veldt, where a solitary example is often to be seen perched high up on the dead branch of a tree on the look-out for its prey. I have only seen it catch and eat large grasshoppers and locusts, but no doubt it partakes of larger fry.

The Little-banded Goshawk (*Astur polyzonoides*) is a fairly common resident of Mashonaland, but it is never conspicuous like the other birds of prey, partly on account of its small size and partly because it keeps in the thickly foliaged trees.

When disturbed it flies with an undulating flight from one thick tree to another, and hides itself amid the leaves.

The African Buzzard Eagle (*Asturina monogrammica*) is a small bird, and the name "Eagle" seems rather a misnomer; superficially this bird resembles a small thick-set Falcon. It is abundant in Rhodesia, though I believe it is rare elsewhere. It is found in the wooded districts, and seems to keep in the vicinity of water, where no doubt its prey is abundant. This Eagle is a quiet, gentle, and unobtrusive bird, doing very little harm and feeding upon large insects, principally flying ants and locusts.

I have nearly always found it in pairs living in the thick and dense trees; it is not at all timid, and will allow one to approach quite closely before it flies away. In colour it is a light powder grey, the under parts being white finely barred with black, the cere and feet a coral red.

I did not see a great many of the numerous Eagles that inhabit Rhodesia, but the species that I have seen and been able to identify are the Booted Eagle (*Eutoemaetus pennatus*), a small brown buzzard-

like bird ; the Tawny Eagle (*Aquila rapax*), a large bird of a light brown shade ; and the huge Wahlberg's Eagle (*Aquila wahlbergi*), a bird of uniform dark brownish grey with large brilliant yellow eyes, which give the bird a terribly fierce expression.

I have usually seen these birds on the wing, and one's chance of studying their habits is almost nil, but they are essentially creatures of the air, and shun the habitations of mankind except occasionally to steal an Owl.

To me a caged Eagle seems a pathetic creature, a king robbed of his heritage, with the longing for freedom ever in the expression of its proud fierce eyes.

Heuglin's Robin Chat (*Cossypha heuglini*) is fairly common in certain localities where thick undergrowth is plentiful.

In the dense tangle vegetation of the great ant hills by the Umsururu River I often found this handsome bird, where it is more often heard than seen. It has a remarkably rich Thrush-like song, which it utters from the centre of a thick bush. It is a shy bird and very difficult to watch. It appears to keep in pairs.

That strange bird the Wood Ibis (*Pseudotantalus ibis*), whose home is in the tropical interior of Africa, is found sparingly in Rhodesia, but it is only seen in the rainy season or summer, sometimes singly, but often in pairs and occasionally in small flocks. I have seen as many as fifteen together. They frequent the swamps, marshes, and the sides of rivers.

They are large heavy birds, and from a distance look very much like their near relation, the Marabou.

The Wood Ibis is a shy bird, no doubt on account of its large size, but by doing a considerable amount of stalking—a rather unpleasant business when one wears "shorts"—I have been able to observe these birds at close quarters. They have certain times for feeding, namely, in the early mornings and evenings ; the other part of the day is spent in resting.

A number of the birds will congregate together while one of them does sentry duty, the others spend their time in preening, yawning, and dreaming, and altogether appearing to be very lethargic ; but on the slightest sign of danger there is great consternation in the ranks, and

with a great flapping of wings the whole flock rises and circles higher and higher into the "blue".

A flock of these huge birds soaring in great spirals with outstretched motionless wings is a sight to be remembered. A peculiar noise like the sound of a distant aeroplane is produced when the birds are soaring high up in the sky.

In colour these birds seem to vary a great deal, some individuals appear to be a dark brownish grey, while others appear to be nearly white, their sombre plumage is set off by the huge strangely coloured greenish yellow beak and red face markings.

Sometimes a solitary bird or perhaps a pair will suddenly drop down into a flock apparently from nowhere; this causes a mild commotion, the other birds lose their lethargic manner and at once become interested in the newcomers, strutting about with their tails spread and carried at right angles to the back. The Wood Ibis feed upon any manner of insect, reptile, or fish, frogs seem to be their favourite diet.

The Great Reed Warbler (*Acrocephalus acundinacus*) is a summer visitor to Rhodesia, and from November to March is found in the reed beds bordering the rivers. It is a large bird for a Warbler, and at first sight is liable to be mistaken for a Thrush.

The Grass Warblers of the genus *Cisticola* are extremely common on the veldt and in the patches of coarse grass and reeds by the rivers, where they at once attract attention by their loud scolding notes, which they utter from the top of a tall grass stem or bush, the meanwhile flicking their long tails from side to side.

These Warblers, of which there are twenty-two different species, are very hard to distinguish from one another, but the commonest ones appear to be the Grey-backed Grass Warbler (*Cisticola subruficapilla*), Fraser's Grass Warbler (*C. rufa*), and the Rufous Grass Warbler (*C. rufilata*). The nests of these birds are beautifully woven structures of fine grass, and are placed on the ground in the shelter of a clump of grass. The tiny eggs are white.

Other species of Warblers are plentiful, and are to be seen in great numbers all over Rhodesia inhabiting the thick bush and reeds by the rivers and pools, but their skulking habits and general brown plumage makes them very hard to identify, especially when one thinks

that there are over ninety different species inhabiting South Africa and many differing but very slightly from each other.

Vultures appear to be fairly common in Rhodesia, and at any time of the day—except in the early mornings—when out on the veldt one is sure to see one or more of these huge birds high up in the sky, a tiny speck quite black against the eternally blue sky.

Vultures travel along at a great speed without a motion of their huge upturned pinions; I think that this is accomplished by the bird floating with an undulating motion and by slightly inclining the wings at varying angles.

Vultures are spoken of as repulsive birds—certainly their table manners are not of the best, and the food upon which they feed is not altogether savoury, at least from our point of view, but when soaring in huge circles with upturned wings or when sitting on a lofty mountain crag, the Vulture looks anything but the ignoble bird that he is painted, also he always keeps his feathers in spotless condition.

Kolbe's and the Black Vulture (*Gyps kolbii* and *Otogyps auricularis*) are the common Vultures of Rhodesia, but they are not so common as formerly, owing to the laying down of poisoned carcasses for the large carnivora: owing to this the Vultures have quite disappeared from some parts of South Africa.

The Glossy Ibis (*Plegadis falcinellus*) is sometimes seen consorting with the flocks of Buff-backed Egrets that wait attendance upon the herds of cattle, but they are only summer visitors from the more temperate climates, and are rare in South Africa.

With the coming of the summer and the rains many species of Duck are to be seen on the secluded pools and small lakes, and the marshes and swamps.

The Pink-billed Duck (*Pæcilonetta erythrorhyncha*) comes in large flocks, varying from twelve to many hundreds of birds. These Duck are wild and shy, though when disturbed they foolishly fly round and round in circles over the water from which they have risen, making an easy shot for the gunner.

The South African Pochard (*Nyroca erythrophthalma*) seems to be a rare bird in Rhodesia as far as my observation of it goes; it is found singly on the secluded reaches of the reed-fringed rivers, it is usually

comparatively tame ; an individual that I had under observation was quite fearless and would come swimming round and round as I sat on the bank. I grew to regard him as a pet, and though I asked for him not to be shot he was one day slaughtered by a callous youth, much to my regret.

The beautiful little Pigmy Goose (*Nettopus auritus*) is one of the most beautiful of the African ducks. These birds invariably live in pairs on the quiet reaches and backwaters of the rivers, and many pleasant hours I have spent in watching these charming creatures ; as soon as they get used to one's presence, they will paddle round and round in front of one, each time getting nearer ; this is only done out of curiosity.

I once saw a drake eat a large blue water lily ; it was floating on the water almost at my feet, and as soon as the bird saw that I meant no harm he swam up, hesitating every few yards ; when he was within reach of it he stopped, gave me a good look, seized the flower, which was almost as large as himself, and pushed it in front of him until he reached his mate, where he proceeded to pull it to pieces and eat it. The little duck was anxious to get a piece, and she swam round all the time he was devouring it, but he refused to share it with her, no doubt thinking that she was quite at liberty to pluck one for herself.

A very noticeable feature of the drake is the beautiful almond green of the feathers on the back of the head and neck.

The unique and handsome Knob-billed Duck (*Sarcidiornis melanota*) or Comb Duck is fairly common on the ponds and lagoons throughout Rhodesia (though not as numerous as formerly) in the rainy season ; it is to be seen in small parties of from four to six. It is extremely shy and wary, no doubt owing to the great persecution it undergoes at the hands of the gunners.

The Comb Duck is a large bird exceeding in size the European Shelduck, and in colour is brilliant metallic purple blue above, the speculum being a wonderful copper colour, the neck, breast and the whole under parts being pure white, the neck and upper breast indiscriminately spotted with black ; there are two tufts of silky yellow feathers at each side of the tail. The drake has a peculiar horny knob or comb on the upper mandible, and in the old males this reaches

a large size ; it is very noticeable when the birds are in flight. The ducks are much smaller, being about the size of the European Mallard, and their metallic plumage is much duller.

These birds roost at night in the dead trees on the river banks. When feeding they keep a sharp look-out for danger, and upon the slightest sign of a human being they take wing and travel many miles before alighting again.

The Long-tailed Cormorant (*Phalacrocorax africanus*) is an exceedingly common bird on the rivers; and is often confused with the Snake Bird or Darter, a bird which it closely resembles both in colour and form. It is of a bronzed brown colour, each feather being edged with black, the centre of the breast is light creamy brown ; these birds vary a great deal in colour, some being almost black, while others are nearly buff. They are essentially birds of the water, being perfectly at home in that element, but are extremely clumsy and ungainly when in the trees. They swim with the entire body submerged, only the head and neck being visible above the surface. They can dive and swim under the water with great agility, and can remain under the surface for an incredibly long time.

In the evenings the Cormorants come from many miles to roost in one special tree by the edge of the water, which is usually the roosting place of Egrets as well. Their food consists entirely of fish.

THE BREEDING OF THE GUIANA PARROTLLET (*PSITTACULA GUIANENSIS*)

By DR. WILDEBOER

In June, 1924, I had privately imported from Dutch Guiana (Surinam) four of these Parrotlets. They arrived in splendid condition and were put in a large flight indoors, where they soon settled down and by their behaviour proved to be two true pairs. The hens, I may say, are easily recognized by their yellowish foreheads, whereas the cocks are bright green right down to the upper mandible ; also they show much less blue in the wing. Further, it may be noted that the pairs faithfully keep together at night, each pair roosting by itself.

For no apparent reason one of the cocks died within a fortnight, and was soon followed by his mate. The remaining pair I turned

out in an outdoor aviary at the beginning of September. In this aviary there is a mixed collection of Waxbills, Mannikins, Grassfinches, small Doves, and also a true pair of Blue-winged or Passerine Parrotlets. How I wish I had not had the latter, for alas their presence led to disaster.

The Guianas soon chose a square closed nest-box with a round opening in the front of about $1\frac{1}{2}$ inches diameter. In this box there was a little hay, and it was really meant for a pair of Java Sparrows. As it was getting rather late in the season I did not think the birds intended breeding, but merely chose the box for sleeping quarters. On looking inside, however, I found to my surprise that the little hen had laid. The egg is white in colour, slightly oval in shape, and a little smaller than that of a Budgerigar. She laid four eggs, and then I found her one morning on the floor of the aviary, apparently eggbound. As the nest-box felt nice and warm inside, I decided not to take her in straight away, but give her a chance in her own nest. On peeping in again just before dinner I saw to my satisfaction that the number of eggs had increased to five. She laid two more eggs without any trouble, and from now on it was quite an exception to see her out. The cock must have fed her on the nest, as he spent most of the day feeding outside. At night, however, he always went into the box, and even in the daytime he sometimes sat beside the hen. Things looked very promising and would no doubt have gone all right, had not my cock Blue-wing at this period died. The hen did not mourn his loss for long, but tried her hardest to get the cock Guiana for second husband. He, however, would have nothing to do with her, and at the most only tolerated her to the extent of allowing her to perch beside him. I have no doubt that during one of these tolerant moods Mrs. Guiana must have flown out of the nest for a little exercise. Mr. G. promptly left the Blue-wing hen and went to his lady-love. Mrs. Blue-wing became jealous, lost her temper, and scalped her lawful rival to death. And that was the sad end of my first attempt at breeding Guiana Lovebirds.

It was not until the beginning of this year that I was able to secure another hen from a well-known London dealer. Twice after advertising for one I had a hen Blue-wing sent to me. To distinguish the two birds the feet are a good guide, for in the Blue-wing they are distinctly grey, whereas in the Guiana Parrotlet they are of a pinkish flesh colour.

I caught the cock bird and put him with the new hen in an indoor flight. In the beginning of April I put them in the outside aviary. (Needless to say the hen Blue-wing was first removed.) They soon went to nest in the very same box, laying seven eggs, and after sitting for nearly three weeks the hen left them, or rather she left the nest-box, for there was only one egg to be found, and this was fertile. What became of the other eggs I cannot say; as I have neither mice nor any birds that interfere with eggs in this aviary, I think the birds must have destroyed them themselves, most likely being disgusted with my repeated interference.

After a while they went to nest again, choosing another box, the dimensions of which were $4\frac{1}{2}$ in. \times 5 in. \times 7 in. Except for being only half its size it was exactly like the first one and also contained a little hay.

On 23rd May the hen laid her first egg, and in all she laid eight eggs. This was only ascertained later, as she rarely left the nest after laying; indeed, she spent most of her time in the nest-box several days before laying. In the third week of June I had an opportunity to peep into the nest again and counted four naked youngsters and four eggs. Two more of these hatched, and the remaining two were clear. Unlike Budgerigars the chicks remain naked for a long time; there seems to be hardly any down, and when the quills appear the naked skin can still be seen between them. It is quite easy to pick out the young cocks by the blue in the wings, which is entirely lacking in the hens. Also the foreheads of the latter are distinctly yellowish.

On 16th July, that is approximately 32 days after hatching, the first youngster, a little hen, flew out of the nest. The next day two more left the nest. They do not appear to be wild, and allow one to approach them within a yard. One of them even came on to my finger. They are exactly like their parents, only a shade smaller, and quite strong on the wing, rarely missing the perch they intend to fly to. There are three more in the nest fully feathered and quite ready to leave it.

In my opinion the Guiana Parrotlet goes to nest more easily than the Blue-wing, and also is a more reliable sitter, at least, that has been the case with the pairs I have. They are also much livelier birds and more pleasing to the eye except for the lovely blue rump and underwings of which the cock Passerine Parrotlet may boast.

JAPANESE AVICULTURE

By J. DELACOUR

(Concluded from p. 218)

There are three important Zoos in Japan, at Tokyo, Osaka, and Kyoto. All three are about the same size and importance, Osaka being perhaps the best. They are well laid out and beautifully planted with cherry trees, which were in full bloom and looked their best at the time of my visit.

Each of these Zoos has a good collection of big mammals : Elephants, Hippopotamus, carnivorous beasts, and Monkeys, and very good birds. Nearly all kinds of interesting native birds, big and small, are exhibited. Large and fine aviaries house waders and waterfowl. Among their rarer possessions I noticed the following :—

At TOKYO.—Formosan Occipital Pies (*Urocissa caerulea*), Japanese Storks (*Ciconia boyciana*), Formosan Sibias (*Lioptila auricularis*), Alcippe (*A. morrissoni*), different Eastern Thrushes and Jay Thrushes, Yucatan and Pileated Jays, Roulrouls, Manchurian, White-necked, Hooded, Australian, and Black-necked Cranes, European and Australian Pelicans, beautiful Pelagic Sea-Eagles, Ostriches, Emus, and one Cassowary.

At OSAKA.—Manchurian, White-necked, Demoiselle, Sarus, Common, Hooded, and White-Asiatic Cranes, Japanese Storks, Asiatic Jabiru and Tantalus, Javan Adjutant, Philippine Pelican, Argus, Monauls, Australian Brush-turkey, Giant Barbet, small Japanese Woodpecker (*Iyngipicus*), Cuckoo, Mexican Toucans, Pelagic Sea-Eagles, Ostriches, Emus, and Cassowary.

At KYOTO.—European Pelicans, Manchurians, White-necked, Sarus, Common, Demoiselle and Hooded Cranes, a Condor, various Sea-Eagles.

There are also some aviaries and enclosures in many parks in Tokyo, Nara, and Manchurian Cranes, Pelicans, various Ducks and Geese are to be seen on ornamental ponds.

At Rinkoji, amongst the hills, which used to be one of the imperial shooting grounds, there is a large experimental game farm, where many Pheasants are reared with a view of propagation and acclimatiza-

tion. The young birds are sent to smaller stations in the various provinces, where they are propagated and finally liberated. The native Green Pheasant (*P. versicolor*) and the Corean Ring-necked Pheasant (*P. colchicus karpowi*) are extensively bred, while there is a fine general collection of game-birds, and also of cage-birds, as well as a nice museum.

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It is very gratifying to find that in Japan almost everybody who is an ornithologist is also a bird protectionist and an aviculturist, the different aspects of bird study being all the better for the combination. Aviculturists who keep and breed cage-birds are certainly more numerous in Japan than in any other country, and perhaps this fact is not well enough known.

As to larger collections, there are as many in Japan as anywhere else, and they are just as good. It is true that there are no large ornithological parks in Japan, as a few exist in Europe, but I have visited excellent aviaries and some aviculturists have built a large number of them. As a rule, Japanese aviaries are well built, mostly of wood, and have very good and roomy shelters; they resemble ours in general style, but perhaps are a little smaller on an average. Most of them are meant for one or two pairs of birds only.

I have visited eight collections, which are considered the best in Japan, and shall give a short account of them.

Prince Taka-Tsukasa, who visited Europe last year and is well known to many of us, keeps a large number of birds in his garden in Tokyo. His present accommodation consists of a bird-room with cages and some fifty aviaries; most of them are covered with a wooden roof. But our member is now building a new home and new aviaries, larger and more numerous, in the suburbs, where he hopes to move in a year or so. His collection consists mainly of Pheasants, Pigeons, Ducks, Parrakeets, and small birds, and I noticed the following:—

Alector Curassow, Monauls, Cobot's Tragopans, Golden, Amherst, Green, Elliott's, Shining, and Ijima's Copper Pheasants, Vulturine Guinea Fowls, Grey Partridges, Pallas' Sand-Grouse, Chinese and Formosan Bamboo-Partridges, Button-Quails, Cayenne Rails, Nicobars, Fruit-Pigeons, and many Doves, Mandarins, Carolinas, Chiloe Wigeons,

Falcated Ducks, South African and Abyssinian Yellow-billed, Indian Spot-billed, and American Red-headed Ducks, White-faced and Javan Tree-Ducks, Pale-headed, Derby's Jendaya, Moustache and Canary-winged Parrakeets, Yellow-naped Amazon and Blue-rumped Parrots (*Psittinus*), Madagascar, Abyssinian and Peach-faced Lovebirds, Guiana Parrotlets, and Budgerigars of all varieties, Common Crested and Dusky Mynahs, Green Glossy Starlings, Chinese Suthoras (*S. webbiana*), Mistle Thrush, European Chaffinches, Bullfinches, and Goldfinches, and many Weavers, Whydahs, and other small birds. Blue Budgerigars, brought from France last autumn, have already bred and produced a pretty "white" male, while one pair of mauve (or cobalt) born in the summer, 1925, have already reared two broods, four mauve and four grey young ones. Guiana Parrotlets breed freely. Suthoras are very pretty little birds with tiny beaks, quite abundant on the Shanghai bird-market; their diet is that of the Tits. I had the pleasure of bringing safely from Indochina a fine male Rheinardt's Argus Pheasant, Edward's Pheasants, Siamese Firebacks, Tantalus and Episcopal Storks, Black-headed Ibises and Edwards' Porphyrios, which now are all in Prince Taka-Toukasa's collection.

Dr. N. Kuroda, the well-known ornithologist, lives with his father, Marquis Kuroda, in a beautiful old house, with a very large and beautiful garden, situated in the centre of Tokyo. His museum, by far the best in Japan, is of great interest, and his collection of skins, especially of Far Eastern birds, is truly excellent. The pearl is a pair of the exceedingly rare *Pseudotadorna cristata*, of which only one other specimen is known to exist elsewhere.

Dr. Kuroda is also a keen aviculturist. A small part of the large pond in the garden has been covered with a very large aviary, devoted to Waterfowl, of which there are about one hundred, including Black and Eastern Bewick's Swans, Chinese, Hutchins' Grey-leg, Bar-headed, Serrated-billed, and Siberian Bean Geese, Ruddy Shelducks, Scaup, Tufted, Pochard, Gadwell, Shoveller, Pintail, Falcated, Wigeon, American Wigeon, Yellow-billed, Chinese, Spot-billed, and Mandarin Ducks, Baikal, Garganey, and Common Teal.

All the native Ducks and even an American Wigeon drake have been captured on Dr. Kuroda's duck-hunting ground, where one can

enjoy a most interesting old Japanese sport, in which the birds are caught by means of a sort of large butterfly net when they rise from narrow channels. I had the pleasure of taking part in one of those Duck-catching parties which Dr. Kuroda had kindly organized for my benefit. In a courtyard close to the garden and on the way to the museum, there are many aviaries and a bird-room. The jewels are three males and one female of the fine Mikado Pheasant, a Formosan species that has quite disappeared from European aviaries, and as the Government rightly prohibits the capture of this rare bird the only chance we have of ever seeing it again in our countries lies in Dr. Kuroda's future success with his birds and new ones he may obtain through an official permission. There are also Corean and Chinese Ring-necked, Versicolor, Elliott's and Copper Pheasants, and different hybrids, Common and Spicifer Peafowls, Chinese and Formosan Bamboo-Partridges, two species of Godwits, Turnstones, Cayenne Rails, Gulls (*Larus crassirostris*), different Parrots, among which a beautiful and rare Lory (*Eos rubiginosus*), several native Thrushes (*T. cardis*, *eunomus*, *hortulorum*, *pallidus*, *chrysolaus*), Japanese Robins and "Nightingales" (*Horornis c. cantans* and *H. c. canturians*), Suthoras, Blue Magpies (*Cyanopica cyanus japonicus*) and different seed-eating birds.

Marquis Yamashina also owns very nice aviaries and is mostly interested in Waxbills and other small birds. His aviaries are quite new, pretty, and convenient; there is one suite of eight and another of five small aviaries, with roomy houses, each one for a pair of birds. I noticed among others Diamond Sparrows, Sydney and Crimson-rumped Waxbills (*Estrilda rhodopyga*) with nests and young, three birds which do not breed in cages. There is also one large aviary for Spicifer Peafowl, and three others, which can communicate with two large flights, rather like those of Mr. Ezra, where Corean Pheasants and many small birds are living. In two pretty cages, in the drawing room, I noticed pairs of Japanese and Samoa Zosterops. There is also a bird-room with numerous cages of native birds.

Mr. Takanaru Mitsui is mostly interested in domestic fowls, and I have seen many very ornamental and curious Japanese breeds in his large and lovely garden; of course, the famous long-tailed Phoenix

Fowls, also called "Yokohama" in England, being the most remarkable one. I have seen cocks with tails 6 to 12 feet long. M. Mitsui has also a fine aviary, with Amherst Pheasants and many small birds, including a Scarlet Tanager seven years old. In his house he keeps a marvellous collection of artistic cages and of pots for food and water, true works of arts. He also has a wonderful series of water-coloured drawings and photographs of all the Japanese breeds of poultry.

His cousin, Mr. Takanaga Mitsui, keeps a very large number of birds, and also of poultry, pigeons, rabbits, orchids, and dwarf trees, all of the best kinds. Near the house is a pretty and large flight with a fine pair of Argus Pheasants and many small birds. In his bird-room I especially noticed a Pied Hornbill, a Bald Starling (*Sarcops*), a Woodpecker, Long-tailed Tits, and Roulrouls. Farther on one saw pens with Manchurian, Common, Demoiselle and Sarus Cranes, many Pheasants' and Parrakeets' aviaries and a large garden for Ducks and Waders, either native or Indian species. The whole constitutes a large and fine collection.

M. Hattori keeps his birds in the old Japanese fashion, all in cages, except for an aviary of Budgerigars. He has a very fine collection of Parrots and small birds, among which I especially noticed White Canaries, Colombian Siskins, many Australian Finches, and Dufresne's Waxbills.

All the above amateurs live in Tokyo. Mr. Y. Matsunaga's garden, at Fujigori, is one of the prettiest that I have seen, in a most beautiful situation, the glorious Mount Fuji making a wonderful background to it. Behind the garden a large piece of ground has been devoted to birds. In the garden is a nice small birds' aviary, where Chinese Quails, Dusky Rails (*Porzana fusca*), Diuca Finches, and Black-headed Siskins are conspicuous; there are also several curious hybrids between the last-named bird and the Canary. In the yard one finds several rows of good aviaries of different types and sizes, which house Cabot's Tragopans, Germain's Polyplectrons, Ijima's, Elliotts', Reeves', and many other Pheasants, Sannerat's Jungle Fowl; numerous Parrakeets, among which there are King, Barnard's, Ornate Lorikeets, Plum-headed, etc., and many rare Weavers, Waxbills, and Finches, with nests and young. In the cages of the bird-room is a fine series of native birds,

the rarest being a fine White's Thrush (*Geocichla dauma*), a Japanese Rock-thrush, two perfect albino Larks, and many foreign species, including Yellow-winged Sugar-birds. A pair of Black Swans on a stream, while a pair of fine Manchurian Cranes have nest and eggs. A young one from last year lives in the next enclosure. Many birds are bred every season in these aviaries. M. Matsunaga is also a very keen protectionist, and is doing a lot of useful work in that way, promoting bird sanctuaries and editing excellent popular pamphlets with coloured plates in the style of those of the American Audubon Societies.

The last collection that I visited was that of Mr. R. Okada, at Thami, near Osoka, in the heart of the best bird-breeding district. This is considered as the most important in Japan. For the number and rarity of species it can well bear comparison with any other in the world. So devoted to birds is Mr. Okada that he called his home after one of his favourites, "Gouldian Finch House." Behind the house a large garden has been given up to birds; aviaries are built all round and in the middle, with very numerous compartments, so that most pairs can be kept separate. There are also three bird-rooms with cages. The whole installation is very substantially built, prettily arranged, and well kept.

Mr. Okada keeps most species of Pheasants and game birds, the rarest being Argus, Vulturine Guinea Fowls, Monauls, Noble and Crestless Firebacks, and above all a female of the scarce Malayan Peacock Pheasant; there is also a pair of the interesting Formosan Tree-Partridge (*Arboricola sonorivox*), a fine pair of Globose Curasows and Roulrouls. Germain's Prolyplectron and Noble Firebacks were bred last year as well as commoner species. A Flamingo and some Ducks inhabit a very pretty flight. His *Columbidæ* are numerous, and I noticed the following rare ones: Crowned Pigeons, Bleeding-Hearts, Plumed Ground-Doves, and Jambu Fruit-Pigeon.

The collection of Parrakeets is excellent and very extensive, the best species being Pennant's, Bauer's and Stanley's Broadtails; Bourke's and Elegant Grass Parrakeets, Swifts, Many-coloured, Rock-peplars, Swainson's and Mitchell's Lorrikeets, Violet-necked Lories, Peach-faced, Madagascar, Abyssinian, and Nyasa Lovebirds, and Red-and-yellow Macaw.

Among the many small birds were all the Australian Finches existing in Japan as well as most Weavers, Waxbills, and Whydahs, and Finches are represented. Special mention must be made of the following: Orange-breasted Flycatcher (*Cyornis tickellia*), Asiatic Sun-bird, Tricoloured Tanager, Black-headed and Yellow-winged Sugar-birds, Tricoloured and Pin-tailed Parrot-Finches, Pectoral and Rufous-tailed Finches, Sydney and Violet-eared Waxbills, Fire Finches (*L. rubricata*). And, as a fine conclusion, we may cite a Mexican Toucan and four Birds of Paradise, a pair of Reds and males of the King and Lesser.

* * * * *

As may be expected from the number of amateurs, bird dealers are extremely numerous in Japan. The city of Osaka, for an example, has over one hundred bird shops, fifty of which have been started within the last two years; it shows plainly that aviculture is rapidly increasing in the country.

With Prince Taka-Tsukasa I visited many shops in Tokyo and Osaka, and on the whole they can well bear comparison with those nearer home. They are very well stocked and very well kept as a rule. In almost every one specimens of many delightful native song birds, such as the Robins, Warblers, Flycatchers, Thrushes, etc., are offered, each in a pretty bamboo cage, at very reasonable prices. Foreign birds are always abundant, and there are rare ones too, Chinese and Malayan species being the commonest. Parrakeets are numerous, and also Lories and Lorrikeets, which seem to come oftener to Japan than to England, judging by the quantity and variety seen in the shops. Some Cranes, Ducks, and Pheasants are also represented in several shops.

In Tokyo there is a dealer who keeps, in Akasuka Park, quite a fine menagerie, with Elephants, Hippopotamus, Carnivores, Monkeys, and crowds of large and small birds; he shows and sells them, and apparently is doing very well out of it. We have nothing like it in London or in Paris.

* * * * *

I hope the above notes will show to many of us, who may think that we are the only good aviculturists in the world, that our Japanese friends have not much to learn from us, and our members should do their best to keep pace with such enthusiastic bird-lovers.

THE FLAMINGO POND IN THE ADELAIDE ZOOLOGICAL GARDENS

The two illustrations are of the Flamingo Ponds in the Adelaide Zoological Gardens, which ponds were erected in 1886, and have, for many years, provided one of the most attractive exhibits of the Adelaide Zoological and Acclimatization Society.

The Flamingoes have always done remarkably well, and it is very rarely that a death takes place among them.

Although they have ample space, it is strange that under the circumstances they have never laid an egg or shown any sign of nesting.

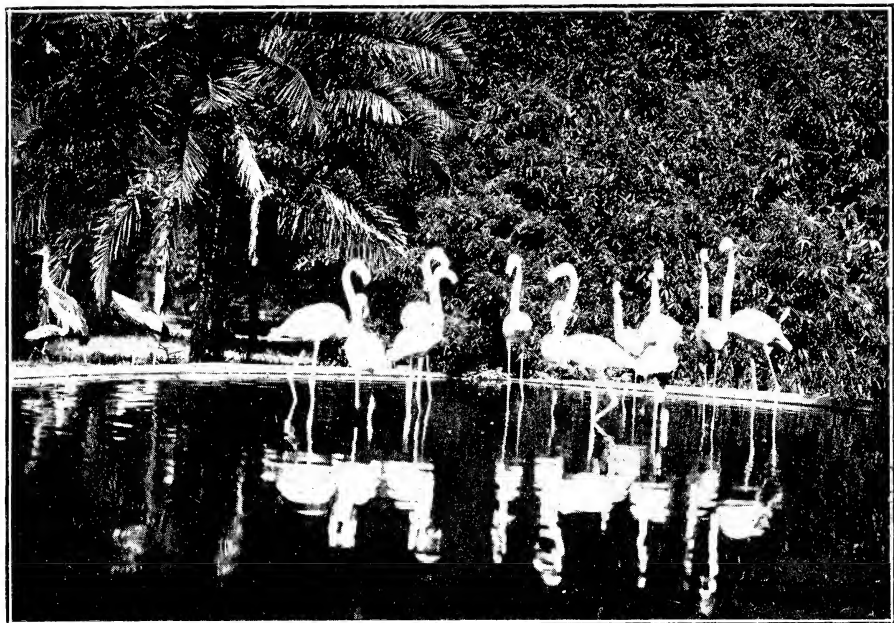
There are nine species of Flamingoes, and they have a very wide distribution, as they are found in most of the warmer regions of the earth, Australia being one of the few exceptions. They are essentially waders, and obtain their food, which consists of waterplants and small aquatic animals, by placing their heads under water and searching at the bottom of shallow lagoons or marshes.

[The accompanying photographs are by Mr. W. S. Smith, of Adelaide, and are sent by Mrs. J. H. Gosse.]

A VISIT TO FOXWARREN PARK

On Saturday, 24th July, about fifty members of the Society accepted the kind invitation of Mr. and Mrs. Ezra to spend the afternoon at Foxwarren Park.

Although the weather was dull, the drive from Hyde Park Corner to Cobham in a charabanc kindly provided by Mr. Ezra was very enjoyable. The party arrived about 3.30, and after a cordial greeting from our host and hostess, a most pleasant time was spent admiring the fine collection of foreign birds and mammals. First we visited the indoor bird-room near the house. This contained some fine specimens of the Birds of Paradise, Lutino Parrakeets, a perfect pair of, I think, Mitchell's Lorikeets, one Yellow-fronted Woodpecker, very tame, and a most lovely and rare bird, and the Lutino Pigeon, referred to in last month's *Avicultural Notes*. This must be equal in rarity to the Blue Alexandrine, and Mr. Ezra must be proud of having two such unique specimens in his possession.



The Flamingo Pond in the Adelaide Zoological Gardens.

We now moved on to the large range of aviaries which have been so well described by Mr. J. Delacour in the February issue. In this article a detailed list of the birds was given, so only just a few are mentioned in these notes.

The Spreeo and Royal Starlings at once catch the eye, with their glorious colouring, but equally charming are the Bee-eaters, Touracous, Giant Whydahs with their flowing tail feathers, and the dainty little Diamond Doves. Personally I could spend hours by these aviaries with never a dull moment, and most likely the rest of the party could do the same.

The Parrakeet aviaries were next visited, and here lives that exquisite freak, the Blue Alexandrine and his Lutino mate. I hope in the near future they may nest. Who knows what new colour their offspring might be! A pair of Barrabands had a fine healthy family of three on the wing in another aviary. All the birds seemed perfectly happy and in splendid condition. With housing as near perfect as possible, it could scarcely be otherwise.

We now made our way back to the house, where tea was ready, and after a short rest, visited the large enclosure of about 16 acres of paddock and wooded land. Here, amidst the gorse and heather, live wallabies, Red kangaroos, blackbuck, and deer. Many are quite tame and come up to be fed and petted. Roaming about also were Sarus and Demoiselle Cranes, Chukar Partridges, and several species of Pheasant, including Monauls. Under the trees we saw the nest of a Brush Turkey. These birds do not incubate their eggs, but lay them in a heap of leaves and let the natural warmth of the decaying leaves do this for them. Mr. Ezra did not know at the time of our visit what the nest contained, but we hope he will be able to report a success later.

The clouds which had threatened more than once during the day now broke, and rain began just as we were starting for home.

London was reached about 8.15.

On behalf of the Members and their friends I should like to thank Mr. and Mrs. Ezra for the most enjoyable time spent with them at Foxwarren Park.

SIDNEY WILLIAMS.

CORRESPONDENCE

CONCERNING HOODED PARRAKEETS

SIR,—I had the opportunity recently of seeing on their arrival at Mr. Chapman's a pair of Hooded Parrakeets, not in fully adult plumage, but far enough advanced in the moult to enable one to see what the ultimate colour distribution would be.

It is this matter of colour and its distribution which prompts this note concerning these Parrakeets because one feels that the variations (? different species or subspecies) of Hooded Parrakeets are not completely tabulated in any one book.

I do not pretend to a wide knowledge of these birds ; I have only seen eight live specimens and three of these were in immature plumage : these latter were on exhibition (on deposit) in the Parrot House at the Zoo in May, 1923. I was told they belonged to M. Delacour. Among the remaining five there were, however, three quite distinct and different types of adult male, and my note concerns these. I have never seen the Golden-shouldered Parrakeet (*P. chrysopterygius*) with the primrose-coloured front (forehead) as pictured in Mr. Seth-Smith's book *Parrakeets*, and do not include this in the tabulation, otherwise it makes a fourth variety of these interesting and beautiful birds.

The varieties I have seen are as follows :—

1. A pair seen in July, 1915, and owned by Miss Clare, of Wimbledon, adult birds put up for breeding. The male had a uniformly chestnut-brown coloured hood and an orange lower abdomen and under tail-coverts, and was obviously the bird described by Professor Collett and named by him *P. dissimilis*. I note that in correspondence on this subject in the AVICULTURAL MAGAZINE for 1912 and again in his big work on *The Birds of Australia*, Mr. Gregory Mathews states definitely that Professor Collett's description must have been incorrect, but if he was describing a bird such as the one I saw no other words to my mind could have described it more accurately. I made particular note of the colours and their distribution at the time. I had to wait to see Miss Clare about another bird, and spent the wait looking at these. I had no particular interest in Parrakeets then, but being much struck by these noted their colours, asked what species they were,

and was told they were "Hooded Parrakeets". I saw them again at another time, and had a good look at them then.

2. A single adult male offered for sale in May, 1925, by Mr. Beedzler, and which I think I again saw in June this year. This bird was very like the Golden-shouldered Parrakeet as pictured in Mr. Seth-Smith's book save that it had no primrose front, i.e. it had a black hood and the feathers of the abdomen and under tail-coverts white barred with red.

I rather think this bird must have been one of a batch of six or seven imported by the late Mr. Hamlyn early in 1923, and that the three immature birds I saw at the Zoo on deposit in that year were from the same batch; if so, and if they did belong to M. Delacour, perhaps he could tell us if they also turned out to be of the type referred to here. Taking into account the date of arrival and their immature plumage, one thought that this small batch of birds might have been part of the proceeds of the rediscovery of the "Golden-shouldered Parrakeet (*P. chaysopterygius*)" [*sic*] reported by Mr. McLennan, of the Royal Australian Ornithological Society, at Cape York Peninsula in the *Emu* in October, 1922, and referred to in the AVICULTURAL MAGAZINE in February, 1923, in Mr. Seth-Smith's article. The bird I saw, however, was not a true *P. chrysoterygius*, nor have I seen this type described.

3. The type as imported by Mr. Chapman in July this year, which have the black hood and an orange lower abdomen and under tail-coverts and are the type figured in Mathews' big work as the "Black-hooded Parrakeet (*P. dissimilis*)".

One can but conclude that these four varieties of the Golden-shoulder, for they all have the shoulder marking identical, are local variations of the same bird; whether they should rank as different species or only as subspecies is a matter for the systematists, but one strongly inclines towards the latter. The matter is exactly comparable to Barnard's Parrakeet and its local variations, known as *B.b. whitei*, *B.b. macgillivrayi*, and the variety (unnamed so far as I know) which has no yellow band on the abdomen, a particularly beautiful female example of which last was shown at a Crystal Palace Show recently by the Marquess of Tavistock; four varieties here also.

The question has been raised as to whether the chestnut brown-headed variety (1) is an *early* adult male plumage, which becomes black subsequently, but the pair imported by Mr. Chapman show the moult from juvenile plumage to black direct, and this was also confirmed by the late Mr. Hubert Astley in 1912 when he bred them, though which of the types of Hooded he possessed, whether orange or red and white underneath I do not know, but they had black hoods.

It is a pity that there is confusion as to the naming of these varieties, for instance, if one sees the name *P. dissimilis* is one to put Mathews' or Collett's interpretation on it? Or again, does *P. cucullatus* apply to the first, second, or third variety I have spoken of?

These local varieties taken into account with the well-known variations from type of nearly all Australian Parrakeets of the *Platycercus*, *Barnardius*, and *Northiella* groups, and others, and the fact that their hybrids are said to be fertile seem to point to the fact that Australian Parrakeets generally must be in a particularly active state of evolution, more so than any other mammalian or avian—or indeed vertebrate—group that one knows of, unless one excepts such animals as dogs, cats, pigeons, and—lately—Budgerigars; but in contradistinction it must be remembered that *all* of these latter have evolved purely by artificial selection, so the comparison is not a fair one.

Though much averse to the idea that hybridization may give rise to new species, particularly as hybrids are so commonly infertile, one was much struck by a male hybrid, Redrump (*P. haematonotus*) × Bluebonnet (*N. haematogaster*) (or so it was catalogued) exhibited at the Crystal Palace Show already referred to, it almost exactly resembled a male Many-colour Parrakeet (*P. varius*), yellow front and all! and some of the *Platycercus* and *Barnardius* hybrids at present on exhibition at the Zoo strongly remind one of other but nearly related species.

EVELYN SPRAWSON, CAPT., M.C., M.R.C.S., F.Z.S.

[There is no doubt that Australian Parrakeets vary very considerably according to the locality in which they occur. They vary also with age, and we are inclined to think that the difference in colour of the lower abdomen and under tail-coverts referred to by Capt.

Sprawson is accounted for by the different ages of the specimens in question.

The bird described with a chestnut-brown hood is, however, of very great interest, as it appears to answer to Collett's original description of *P. dissimilis*, which description has been generally considered to have been incorrect owing to the fact that subsequent specimens all had black hoods in the males, although agreeing in every other respect with his description. Mr. North named these black-hooded birds *P. cucullatus*. Certainly the brown head is not a sign of immaturity, but may it not be a sign of old age? It would be interesting to know what became of Miss Clare's specimen.

In any case this is a very interesting observation and it only shows that we have a good deal yet to learn about these extremely beautiful Parrakeets.—ED.]

SIZES OF CAGES FOR BRITISH BIRDS

SIR,—The law as to the size of cages for British birds was explained to the Plymouth magistrates on Friday, 9th July, in the course of a case against Samuel Shepherd, of 15 High Street, Plymouth, for confining two Goldfinches in cages which were not large enough to permit them to stretch their wings freely. Inspector John Mulloy, of the R.S.P.C.A., said that a lot of people who kept birds in small cages did not know what size cages were stipulated by law, and he therefore wished to take that opportunity of informing the public what the position really was. In the case of Larks the cages must be 18 inches long, 10 inches wide, and 9 inches high; for Chaffinches, Greenfinches, Goldfinches, Bullfinches and birds of a similar size the minimum measurements were 10 inches long by 8 inches wide, and 9 inches high; and for Twites, Siskins, Redpolls and Linnets the size was 9½ inches long, 7 inches wide, and 9 inches high. With regard to the summons against Shepherd the Inspector said that the defendant had now provided the birds with a larger cage, and he therefore applied for its withdrawal, a course to which the magistrates consented.

E. A. ROBERTS.

THE NYASA LOVEBIRD

SIR,—Perhaps my experience up to date in regard to the breeding of the Nyasa Lovebirds may be of some interest as it differs somewhat from that of Captain Stokes. I obtained a pair from Mr. Hedges in April, which I turned into the outdoor aviary about the end of the month. Almost immediately they began stripping the bark from some apple-tree boughs and carrying this to the nest-box they had selected. Three eggs were laid, one was unfertile, one I unfortunately broke, and the third was hatched on 19th May. The young Nyasa is a sturdy little fellow, but is still as I write (1st July) in the nest-box, although he looks fully fledged. The parents are building again, and sleep in the box at night. It strikes me as being curious that the bird bred by Captain Stokes emerged from the nest when only a month old; whereas mine, at six weeks, has not attempted to leave home? The nest-box is now so full of twigs, grass, etc., etc., that it is a constant source of wonder to me how it can accommodate the three birds.

G. KATHLEEN GODDARD.

PILEATED PARRAKEETS

SIR,—Since writing my last note on the management of Australian Red-capped Parrakeets I have been obliged to ration my aviary birds as well as the one in a cage. The stronger cock of the outside couple took to feeding his companion all day long, and one afternoon I found the latter very quiet and showing the preliminary symptoms of a fit. I at once caged him and half-starved him for a few days, allowing him no seed at all. On his return to the aviary I provided only a limited quantity of plain seed, and there has been no further trouble. Oddly-enough, it seems to be only tame Pileateds that so persistently over-eat themselves. Before the war I had several of the same species, some of which lived for many years and nested, and I never had the least trouble with their diet, either in cage or aviary; all of these were incurably nervous and unsteady.

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Nyassaland Lovebirds,
Spreo Starlings,
Rare White-breasted Touraco,
Mousebird,
Dinemelli Weavers,
Blue Rollers,
Donaldson's Touracos,
Pigmy Owls,
Cock and Hen Shama Thrushes,
White-crested Jay Thrushes,
Black-headed Sibias,
Golden-fronted Fruitsuckers,
Talking Mynahs, etc., etc.

During the month of August our collectors will be returning from India, Brazil, Abyssinia, Mexico and Africa with further very fine collections, and those desirous of obtaining full details of same are advised to write for a copy of our Monthly Notes wherein may be found full particulars of the forthcoming arrivals.

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FOREIGN & BRITISH BIRDS
IN FREEDOM & CAPTIVITY

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OCTOBER, 1926.

WHITLEY'S CONURE

The subject of the coloured plate is a large Conure, which has lived for some time, and is still living, in Mr. Herbert Whitley's collection at Paignton. It had puzzled many of us as to what species it belonged to, and when it came to London last February for the Crystal Palace Show, Mr. Whitley allowed me to take charge of it and send it to South Kensington to be identified. Here it was examined by a conference of ornithologists, who pronounced it to belong to a species undescribed. It had been originally purchased from Mr. Chapman and had probably come from Brazil, though its exact habitat was unknown.

Mr. N. B. Kinnear described this bird in the *Bulletin of the British Ornithologists' Club*, vol. xlv, page 82, naming it after Mr. Whitley. He gives its generic title as *Aratinga*, a name which is said to have priority to that of *Conurus*, and which it must supersede. Its official name therefore is *Aratinga whitleyi*, Kinnear.

D. S-S.

SOME PECULIAR ACTIONS OF BIRDS

By FRANK FINN

A year or two ago, when there was a Wood-Hoopoe in one of the aviaries outside the small bird house at the Zoo, I noticed with considerable interest that it was probing the inside of a monkey-nut husk with its bill, while holding it against the perch with its foot.

I consider this a peculiar action, because in the matter of using their feet in dealing with an object, or depending on their bills alone, birds are very conservative, and no bird I know of allied to the Wood-Hoopoes uses its foot in this way. In climbing on the wires the action of this bird was like a Woodpecker in action, though less active, while on the ground it also hopped with the tail dragging in Woodpecker fashion. When it flew I noticed that it drew the neck in and held the feet drawn up in front as the Common Hoopoe does.

I have noticed at the Zoo a peculiar habit of the Rhea, which I have never seen recorded, though I have seen a photo of the bird in the position to be described lying down on its chest, with the legs stretched straight out behind it, and the head erect, yet with the eyes closed. The bird was apparently asleep, though in the ordinary resting position the legs are tucked underneath it as usual, and the neck laid down on the back. The head, however, points forward, and I have noticed that none of the Ratite birds, except the Kiwi, seem to turn their heads round behind the wing in the manner of birds generally. Neither do the Ratite birds ever flap their wings so far as I have seen, nor do the Wika Rails or the Kagu—which is apparently flightless. Do no flightless birds use the flapping exercise? The Penguins do, but their flightlessness only applies to aerial flight, for as we all know they do fly in the water, and are very strong winged.

To return to the Rhea, it has a very peculiar action, when dusting, for it picks up the dust in beakfuls and throws it over itself in that way. In drinking it pecks up the water in mouthfuls instead of scooping it up, but I have not noticed if other Ratite birds drink in this way.

Two birds of which I have not seen the courtship recorded are the Crested Screamer and the Flamingo, but I have seen both display at the Zoo. The Screamer puffs itself out, raising its wings behind somewhat after the fashion of the Mute Swan, and after pairing the hen assumes this display pose.

The Flamingo displays by first standing fully erect and stiffly holding out the wings so as to show the under surface, and then craning its neck and body downwards and forwards and again extending the wings, which in this pose display the upper surface; thus the red and black is exhibited in all possible ways. I have, however, never seen pairing take

place, or even any movement towards it, and it is some years since I saw the display in question. To breed Flamingoes, I expect an enclosed reach of muddy backwater on some warm part of our coasts would be the most likely place.

NOTES ON BIRDS OF MOUNT SELINDA, GAZALAND

By SYDNEY PORTER

In July, 1925, I joined a small expedition organized by the Natural History Museum of Salisbury (Rhodesia) for the collecting of ornithological and other specimens. The start was to be made at the beginning of July, but this was delayed owing to the visit of the Prince of Wales to Rhodesia, but on the 19th of July I started in advance with all my kit for Umtali, a beautiful town on the borders of Portuguese East Africa, and two hundred miles north of Mount Selinda. We had heard that a motor-lorry was leaving that week for Chipinga, a small hill village twenty-five miles north of Mount Selinda, hence my journey in advance to arrange the transport of our baggage. My reason for going was twofold, in the first place, to see the country, and secondly, which was perhaps my chief reason, to make a study of the rare birds which inhabit the Mount Selinda region. By boarding the motor-lorry we should be saved a three weeks' trek by ox or donkey-wagon—travelling by wagon is quite pleasant for a few days, but after that it becomes very wearisome. There were few birds of interest in Umtali itself except the White-necked Raven (*Corvultur albicollis*), which frequents the streets in search of garbage, etc. This bird is glossy black with a crescent-shaped patch of white on the hind neck. There was also the White-shouldered Bush Chat (*Thamnolea cinnamomeiventris*), a beautiful bird resembling both in looks and habits a Rock Thrush. It is found on the outskirts of the town in the rocky hills.

So on the 23rd of July, before the first flush of dawn had turned the high peaks of the Inyamutseri Mountains rosy pink, as it did afterwards, we had started. The road, or rather track, lay through mountain passes, through dense tangled jungle, typical African bush veldt, over high mountain ranges, through wide clear limpid rivers and sometimes

through country strangely reminiscent of the English countryside. After two days we arrived at our first camp, Mount Selinda.

The bird life en route was as varied as it was wonderful, and to name every bird seen would read like a hand list, so I will only mention the most noticeable. Hornbills were very much in evidence, both the Red-billed and the Yellow-billed, we saw not only hundreds but thousands of these birds, they literally swarmed along some parts of the track, usually they were in the trees, but often they were to be seen on the road itself. Then there were the beautiful Purple-crested Touracous, but these were few and far between, the wonderful Purple-Rollers (*Eurystomus*), the huge Trumpeter Hornbills, and flocks of the Emerald-spotted Doves.

Mount Selinda (formerly known as Chirinda) is not a very imposing mountain; it is composed of two peaks, known as Mount Maruma and Mount Penga, between four and five thousand feet in height. The Mount Selinda region is one of the most fertile in the whole of Africa, and is composed of vast ranges of mountains and hills, range upon range as far as the eye can see. In height they range from a thousand feet in the hot Sabi valley to over eight thousand in the great Chimanimani Range in Portuguese East Africa. The whole country is very well watered by rivers and fast-running mountain streams, and this in common with the damp tropical heat supports a growth of luxuriant tropical vegetation which is conducive to a wonderfully rich bird life.

The twin peaks of the mountain are clothed by a dense virgin forest, the like of which is found nowhere else in Southern Africa. This forest is composed mainly of mahogany and *Brachystegia* trees of huge dimensions, many reaching over two hundred feet in height, but it is impossible to see the tops of the trees from the inside of the forest; in some parts the undergrowth is absolutely impenetrable, but most parts are easy of access owing to the presence of native paths.

I was held spellbound when I first entered the forest, it was perpetual twilight except where some fitful ray of sunshine penetrated the green tracery above and lit up a patch of the undergrowth below; deathly silence reigned, broken occasionally by the distant cry of the Hornbills or Touracous far up in the tree-tops or by the crash of some forest giant falling decayed to the ground. The hot air reeked with the odour of



To face p. 264.

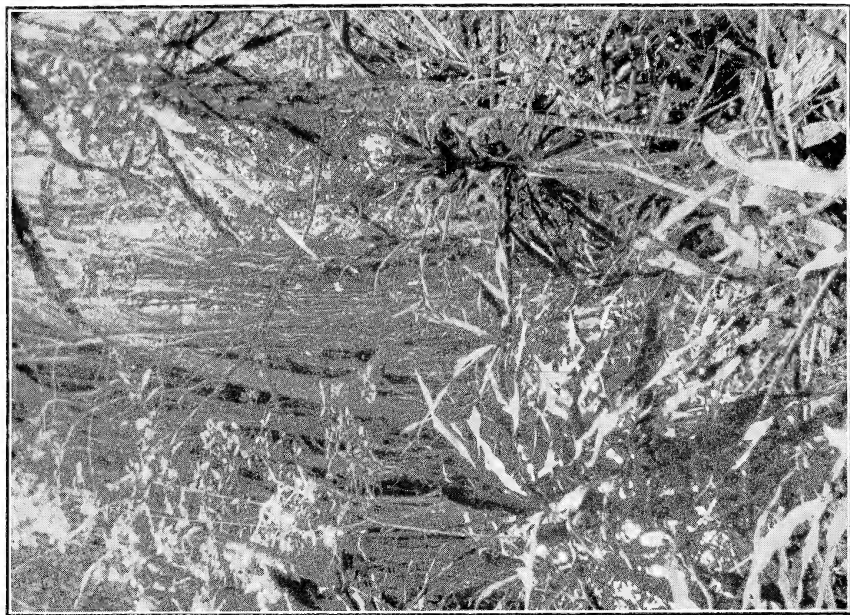


Photo by Sydney Porter.

Tropical Vegetation on Mount Selinda

decaying vegetation and the heavy perfume of the various flowering creepers which festoon the trees. On every hand these giant trees tower up until they are lost in the tangle of vegetation above. During several months spent in this lonely but wonderful part of the country several hundreds of species of birds were seen, but I have only described in these notes the rarer ones, with a few exceptions.

The Starling family is very poorly represented in the Selinda region, the only Starling which I have actually seen on the mountain is the Verreaux's Glossy Starling (*Pholidauges verreauxi*), but this bird, so common in other parts of South Africa, is quite rare; the Purple, Long-tailed Glossy Starling (*Lamprotornis purpureus*) is fairly plentiful in the surrounding districts, on the well-wooded veldt and in the jungle. The Yellow-billed Oxpecker (*Buphaga africana*) or Locust Bird, was, I understand, once very plentiful in the district until the dipping of cattle became compulsory, the bird then partook of the arsenic-poisoned ticks which adhere to the cattle for a considerable time before they fall off, consequently the birds have passed away for ever not only from that part but from most parts of South Africa.

The Black-headed Oriole (*Oriolus larvatus*). This beautiful Oriole is more often seen than heard, though it is very common. Its presence can be detected at once by its loud clear ringing notes. It lives in the thick bush by the mountain streams, where it can obtain an abundant supply of insect food. It is an interesting bird to watch, for it gives one the impression that it thoroughly enjoys life—hopping from branch to branch, shaking out its wings, puffing out its feathers and uttering its rich, joyous calls. Above it is greenish olive, bright yellow on the lower back and the upper tail-coverts, the whole of the head, face, and throat, extending to a point in the centre of the breast, black; the under parts are bright clear yellow; the wings black, marked with white and yellow; the tail feathers black, tipped with yellow, except the two central ones, which are olive yellow. The legs, feet, and beak black.

The Black-headed Weaver (*Hyphantornis nigriceps*). This large and handsome Weaver is found in twos and threes in the flocks of other Weaver birds which visit the small patches of wheat grown by the Dutchmen and Kaffirs in that region, and where it plays great havoc with the grain. These Weavers can always be distinguished from the

other Weavers even when out of colour by their large size and brighter colouring. In the breeding season these birds distribute themselves all over the country, building the usual type of Weaver bird nest on the end of a thin twig of a large tree.

The Smith's Weaver (*Sitagra ocularia*). This lovely Weaver, which at first sight might be mistaken for an Oriole, is found in the wooded kloofs through which run the swift mountain streams on the slopes of Mount Selinda ; it is by no means common, and is found in pairs. Sometimes it comes into the trees near the few homesteads and utters its peculiar un-Weaverlike call. I have frequently seen these birds in the tangled palm clumps by the streams making a minute search of the vegetation for insects. I believe that this species in common with the other members of the genus *Sitagra* is almost, if not entirely, insectivorous. I have seen the birds pulling to pieces the little bunches of dead leaves which gather in the branches of the trees in search of insects, very much after the manner of the Yellow-streaked Bulbul. It is of a confiding nature, and is consequently easy to observe. In colour this Weaver is of a general olive green above and golden yellow below ; the throat is a very deep rich brown merging into golden brown ; the front of the crown and the cheeks are silky golden brown ; the legs leaden blue and beak black ; the iris is white, which gives the birds a hard, cruel expression. The hen is of a general yellowish olive colour, and lacks the dark markings. The male has a harsh rasping song, which he is fond of uttering perched on the branch of a bush or tangled vegetation. The nest is unique, it is of the usual type, but the entrance tube is usually tremendously elongated ; one in the Pretoria Museum is said to have the tube 12 feet in length. I have seen some long ones, but nothing approaching this size.

The Black-backed Weaver (*Sycobrotus bicolor*). Another beautiful Weaver, differing from all other Weavers in its habits, being a forest-loving bird and seldom if ever seen outside the gloomy confines of the tropical forests. Its demeanour is very un-Weaver like, and seeing it for the first time in its natural haunts one would little guess that it was a Weaver. It haunts the dense masses of creeper which festoon the tops of the giant trees, climbing about with remarkable agility, and searching for the small insects which constitute its main food ; in fact, it must be

almost, if not entirely, insectivorous, for there are no small seeds in the forest upon which it can subsist, and it seldom if ever comes to the ground. The construction of the nest differs but slightly from that of the other Weaver birds; it is retort-shaped, with the entrance tube hanging down. It is hung from the end of a long slender branch, at a great height from the ground, and is consequently impregnable. I know of no other bird which places its nest in such an inaccessible position. I have often seen these birds, at least the males, busy pulling the fine hair-like roots of the various orchids and other parasitic plants from the trunks of the forest trees, doubtless with the object of nest-building. I have also watched the birds nest-building; the male seems to do most of the work, while the hen sits near by and sings. The male weaves for about five minutes, and then flies off, and in an incredibly short time returns with a beak full of the fine orchid roots. One would think that the bird would find it difficult to get up the long narrow entrance tube, but this is not so, it just shoots up as it flies, without settling; on reaching the entrance it closes its wings, and the impetus seems to send it right up into the nest. I have often seen this, for the walls, owing to the fineness of the material used, are almost transparent. In colour this bird is a peculiar shade of greyish blue-black above, which gives it a powdered effect; the whole under parts are deep golden orange; the male and female are similar. Flitting about in the sombre gloom of the forest, these birds look extraordinarily brilliant, for being in the tops of the trees one only sees the breast.

South African Ruddy Waxbill (*Lagonosticta rubricata*). These charming little birds are to be found in the old Kaffir lands in small parties of from eight to twelve, where they feed upon the seeds of various grasses and weeds. When disturbed they seldom if ever rise up into the air, but fly through the long grass uttering a continual twittering note; they are very difficult to observe, for it is only occasionally that they settle on the top of a grass stem, preferring to remain on the ground or in the thick vegetation where they breed. In colour the male is rose grey on the head, cheeks, and nape, the upper parts and wings brown, the upper tail-coverts crimson, the tail black, edged with the former colour, below claret colour, the sides being finely spotted with white;

the centre of the abdomen buff, the under tail-coverts black. The hen is paler in colour.

The Red-billed Weaver (*Quelea quelea*). This well-known bird is extremely common, and visits the patches of grain with the other Weavers in huge flocks.

The Red-collared Whydah (*Coliuspasser ardens*). The birds when out of colour associate in vast flocks comprising of thousands of individuals, visiting the wheat patches and doing an immense amount of damage. I have known a flock to eat almost every grain from a five-acre patch of wheat in a very short space of time. They are shot by the Dutch in thousands and eaten; they are plucked, roasted in fat, and eaten whole. Many times I have been out to dinner when thousands of these birds have been dished up on a huge plate, but I could never bring myself to eat them. The males can always be distinguished when in undress plumage by their black wings.

The Eastern Yellow Seed-eater (*Serinus icterus*). These brightly-coloured little Serins frequent the old Kaffir lands and kraals on the slopes of Mount Selinda. Their habits do not differ from the rest of the seed-eaters. They associate in small flocks, picking up their food from the ground. The male has a very sweet song, which he sings from the topmost branch of a flat-topped mimosa-tree.

The Golden-breasted Bunting (*Emberiza flaviventris*). A well-known bird in most parts of South Africa and, like the seed-eaters, is found around the cultivated lands searching for seeds on the ground. It is never to be seen in flocks, but always in pairs. I have frequently seen them in the beds of dry rivers searching in the sand for food. The male is a handsome fellow, a mixture of chestnut, black and white above, the head being striped black and white, and the lower bright golden yellow tinged with orange in the centre of the breast. These birds are usually very tame and when disturbed only fly a yard or two out of one's way.

Yellow-throated Lark (*Macronyx croceus*). South Africa is rich in various species of Larks, about forty different kinds being found south of the Zambesi, but the pick of them all are contained in the genus *Macronyx*, the yellow-throated Lark being one of them. Although a true Lark, this bird seems to live far more in the trees than on the

ground, its extremely long claws seem to be no handicap to it in perching on the most slender twigs. Its song, which is uttered from the top of a tall, bare tree, consists of two notes (pe—wit), many times repeated. In colour it is light brown above, each feather having a darker centre ; the edge of the wing, the margins of the flight feathers, and the outer tail feathers yellow. The whole under surface bright canary yellow ; the throat is divided from the breast by a narrow black collar.

Mount Selinda is rich in the number of Sunbirds which haunt its amazing flower-covered slopes, no less than ten species being found there. The exceedingly rare and beautiful species which is indigenous to the district, the Melsetter Sunbird (*Nectarinia arturi*), I unfortunately did not see, to my lasting regret.

The Nyasaland Yellow-bellied Sunbird (*Cinnyris venustus nyassae*). These exquisite little birds are comparatively common on the slopes of the mountain, they frequent the thick tangled bush and jungle on the outskirts of the forest, where they suck the nectar from the wonderful flowering shrubs and creepers. They are particularly partial to a large tree which bears a profusion of scarlet flowers and by sitting for a time under one of these trees one may observe dozens of these beautiful little birds ; also on the patches of flowering shrub on the mountain slopes in the brilliant sunshine of the early morning these fairy-like little birds can be seen literally in hundreds busily engaged in sucking the nectar from a certain orange-brown flower, which looks like a large nettle, and is, I believe, called the *Leonotis*. The males have a very sweet but short song ; usually they perch on the topmost twig of a bush or small tree and sing this short refrain with great gusto, half opening the wings and fanning the tail from side to side and swaying the body from side to side ; they seem to put their very life into the short string of melodious notes. Often they sing hopping from branch to branch, glistening in the sunshine like living jewels. I have never seen a bird put so much energy into its song as this tiny mite does. Sometimes after the song was over the males would “ show off ” to the females ; puffing out their feathers, they would spread out the brilliant orange pectoral plumes (which are normally hidden), like miniature fans on each side of the breast, and chase the hens from tree to tree. I have frequently disturbed a pair of these birds which had a nest in a dense thicket ;

on my approach the birds would flutter round and round uttering piteous calls. I was never able to find their nest, owing to the denseness of the vegetation, but no doubt they had young ones. A nest which I did find was a very small structure, pouch-shaped, with the entrance at the side, woven of fine grass, with pieces of coarse grass leaves stuck on outside by the means of cobwebs. The inside was lined with soft vegetable down and feathers, and the whole was fastened by the top to a slender twig and placed about 3 feet from the ground in a thorn bush. In the early spring (September and November), when the *Leonotis* flowers have died down, a few of these birds enter the forest to feed upon the nectar of the flowers of the forest creepers, the rest seek pastures new until the *Leonotis* blooms again. These sunbirds are remarkably tame, and allow one to watch them from a few yards distant. Mount Selinda is the only place in Africa south of the Zambesi where they are found. The adult male is rich metallic purple green above the crown; the upper tail-coverts are purple; the tail black, edged with the same colour; the throat is metallic blue, going into brilliant purple on the breast; the under parts are golden yellow; the elongated pectoral tufts bright orange. The legs and beak, black. The hen is greyish about the head, dark olive green on the back, and greenish yellow below. The young resemble the hen, but are much lighter in colour, the upper parts being bright olive green and the lower parts bright greenish yellow.

The Lesser Double-collared Sunbird (*Cinnyris chalybeus*). This is another exquisite creature which is fairly common on the mountain. Its habits are very similar to those of the rest of the family, except that it frequents the environs of the few scattered homesteads and is seldom seen far away from them. It feeds mainly upon the nectar of the hibiscus and the bougainvillaea and upon minute insects. The males are extremely pugnacious, and frequently engage in furious combats. I have often seen two males fall to the ground in locked embrace, almost exhausted by their exertions, and have all but been able to pick them up with my hands. I have only found one nest belonging to this species; it was a very untidy structure, very different to the neatly made nests of most of the Sunbirds. It was placed at the top of a tall tree, and composed of fine grass and vegetable down; the entrance

was at the side, and had a kind of rough porch over it. A description of this bird is unnecessary, for a good plate appeared in the Magazine some little time ago of the following species from which the present differs only in size and the width of the scarlet band across the chest.

The Greater Double-collared Sunbird (*Cinnyris afer*). I have seen this Sunbird but seldom ; it never frequents the environs of the homesteads like the preceding. It is timid and extremely wild, and lives on the high wooded veldt. It is at once distinguished from the Lesser Double-collared Sunbird by its much larger size, and by the fact that the upper half of the breast is scarlet instead of only having a narrow band as in the former bird.

The Kirk's Sunbird (*Cinnyris kirki*). This bird reminds one of the Amethyst Sunbird (*Cinnyris amethystinus*), being of a general deep black with a wonderful purple maroon bloom ; the crown is golden green, the throat and lesser wing-coverts brilliant reddish purple, the legs and beak black. It is a rare bird and far from common anywhere. It is found on the scrub-covered slopes of the surrounding hills and mountains, and occasionally on the less densely covered slopes of Mount Selinda. This Sunbird is extremely wild, and it is impossible to get within several hundred feet of it ; this is perhaps on account of its colouring, which makes it the most conspicuous of all the Sunbirds. At a distance it looks much larger than it really is. It is only in certain lights that the plumage assumes the remarkable plum-bloom shade mentioned.

The Olive-coloured Sunbird (*Cinnyris olivaceus*). These drably coloured birds, which might easily be mistaken for the females of some brightly coloured species, are frequently seen in the thick bush. They are not common, and are usually seen singly though sometimes in the company of other sunbirds. On clear hot mornings when the whole countryside is bathed in brilliant sunshine, a great many Sunbirds are to be seen on the jungle-covered slopes of the mountains ; sometimes there are hundreds of them, and amongst the bejewelled throng there are usually to be seen several of these sombre coloured birds. They appear to be almost twice the size of the other Sunbirds ; these, in company with the others, delight in sucking the nectar from the

Leonotis. If one encroaches on their breeding grounds a great commotion commences ; the birds flutter round within a few yards of one, chattering and scolding to the uttermost of their powers. During the breeding season one seldom sees more than an odd bird in the forest, and then never more than a few hundred yards from the edge ; there they search the bases of the large *Dracaena* leaves for insects, hovering meanwhile in the air after the manner of a humming-bird ; they do not do this for any prolonged period, only for a few seconds. After the breeding season is over these birds desert the open mountain slopes, and take to the seclusion of the gloomy forest, where they go about in small parties searching the low vegetation for insects. I have frequently seen these birds making great efforts to unroll leaves which contained insects, sometimes a bird would hang on to a leaf in the air and exert its full strength until the leaf broke. The Olive-coloured Sunbird has a very sustained song for a Sunbird, and quite a sweet one, too ; it lasts for several minutes at a time. In the sombre gloom of the forest all birds seemed to assume a dark olive colouring, and I have frequently mistaken these birds for some of another species. The colour of this Sunbird is generally olive green, greyer on the breast ; the rather long pectoral plumes are bright golden yellow, but these are never seen unless the bird displays. The length is about $5\frac{1}{2}$ in. ; the legs and beak are black.

The Collared Sunbird (*Anthothreptes collaris*). A gem of the first water. Glittering metallic golden green above, also on the throat and chest, which is divided from the breast by a narrow collar of metallic purple ; the wings are olive, the lesser wing-covert and tail black, edged with metallic green ; the under parts bright yellow ; the legs and bill black. This is one of the few Sunbirds in which the female resembles the male ; she differs only in having the whole under surface yellow. This, to my mind, is the most exquisite of the Sunbirds, the tiniest of them all, yet so perfect in colouring. It is quite common on the slopes of the mountain, and like the other Sunbirds, is seldom found far from the *Leonotis* flowers while they last, flitting from flower to flower, its resplendent emerald plumage flashing and glittering in the sunlight. There is only one other African bird which rivals it in metallic beauty—the Emerald Cuckoo. A dried skin can give but little idea of the

beauty of the living bird. As well as frequenting the flowers for nectar, these birds may be seen making a minute search of the thorn-trees for small insects, especially spiders. In most of their habits these birds resemble the Nyasaland Sunbirds, except that when the honey-bearing flowers are over at the end of September, they abandon the open slopes of the mountain, and penetrate far into the forest, the attraction being, it seems, the white star-like flowers of a giant forest tree, and during the succeeding months they can be seen in hundreds in the perpetual gloom. The beauty of their metallic plumage is marvellous when by chance they alight in the pathway of a slanting ray of sunshine which penetrates the green twilight. Once when wandering about in a densely-wooded kloof I came across a Sunbird of a species that I had never seen before ; it was a beautiful creature, and as far as my notes show was as follows : the head velvety black with an amethyst gloss ; a broad collar of smoky brown on the hind neck ; the mantle and scapulars metallic amethyst ; the wings brown, the tail black, the whole under surface pure white ; the female grey. I only saw one pair of these birds ; they were busily engaged in searching for insects on the bushes. They were shy, but I was able to observe them for a long time with the aid of binoculars.

Later I came across them again in Portuguese East Africa, and was able to study them at close quarters ; their habits seem to differ but slightly from those of the rest of the family. They seem to be very rare.

(To be continued.)

THE WHITE-FRONTED BEE-EATER (*MELITTOPHAGUS BULLOCKOIDES*)

By Captain H. S. STOKES

Perhaps it would be as well to record in a short note some particulars of this most charming bird. It was recently mentioned in the editorial notes as a species new to aviculture, five specimens having arrived in June from South Africa with Messrs. Gamage's collection.

The back, wings, and the tail (which is square) are bright green, rump cobalt blue, breast and back of head brown. Forehead and throat pearly white, below which is a broad band of scarlet. Beak fully an inch long, black with a black streak from the base of it to behind the eye. Legs short and feet very small.

The birds were in the most exquisite condition and feeding eagerly on locust meal and hard-boiled egg. So in my enthusiastic ignorance (and not from superior conceit) I braved the gloomy forebodings and fearful prophecies of the pessimists—"awful birds to keep; they must be propped up on their perches, fed all day by hand, washed, kept very warm, and must speedily die of indigestion and misery"—and brought a pair home.

In ten days they were promoted from a cage to a good-sized flight cage with outdoor attachment, and speedily learnt to catch mealworms and black beetles. (No, I do not approve of black beetles in the kitchen, but there they are, and I thank a kindly providence which supplies them as a digestive for Bee-eaters and other glories.)

After this came hot weather, and the President and the Editor and the Secretary to see the birds, and with some trepidation we turned them for the occasion into my small Finch aviary, only to find them the most charming, sensible, and tractable birds we ever had.

Every night, and whenever it rains, they go indoors of their own accord. All day when the sun shines they hawk and hover and swoop for flies, and delight us with their skill and beauty and ease. It is impossible to throw a mealworm in any direction which they do not catch.

Probably the secret of it all is that never have Bee-eaters been brought over so exquisitely before or been so carefully meated off in the early stages of captivity.

Anyhow, they are a joy and a blessing, and I was surprised that the other three remained three weeks in the shop without a buyer. But perhaps it was also a blessing for them that they did, for after Mr. Ezra's visit to me they quickly found a home in his beautiful aviaries, where no doubt many members had the opportunity of seeing them at the party he so kindly gave to us all.

SOME NOTES ON AMAZON PARROTS

By The MARQUESS OF TAVISTOCK

Last summer I was fortunate in obtaining a very beautiful lutino specimen of the Blue-fronted Amazon, the first lutino bird of the Parrot family I have seen, which showed the albino features of red eyes and pale beak and feet. As already described in a previous letter, it is golden yellow where the normal form is green and pure white where the normal form is blue, while the red areas of the ordinary plumage are retained. The effect of primary feathers half snowy white, half velvety crimson, against a body plumage of the richest gold is wonderfully striking and beautiful. Naturally I made plans for trying to breed from so remarkable a bird and as most captive Amazons and nearly all lutinos are hens, I decided to obtain a cock, which I did through the kindness of our Secretary. In time the Amazons became quite friendly, but I was by no means certain that they were a true pair. The lutino was by far the more lively of the two and rather overpowered and bored the green bird by its demonstrations of affection and playful attacks. In the spring, the cock, which had never been very strong, began to show signs of illness, so I removed him from the outdoor aviary and decided to offer the lutino the choice of a robust partner of either sex. I again appealed to our Secretary for assistance, and by her help obtained two fine Amazons which, by the pelvic bone test, she felt sure were male and female. We first introduced the female to the lutino, who tolerated her for a little and then began to bully her. We then tried the male but the reception he got was, if possible, even worse than that accorded to the lady. Either the lutino was still faithful to its invalid companion or else it had come to the conclusion that it was far too good to be bestowed in marriage upon a common Green Parrot! The unfortunate new arrivals had a very thin time indeed. If the male left the wire netting and tried to climb on to a perch the lutino erected all its feathers and bore down upon him, uttering peal after peal of sarcastic laughter until it reached him and hurled him to the ground; then, with an even louder guffaw, it settled down to watch for the next move. If the hen Amazon ventured on to a perch, the lutino struck up a species of chant, delivered in the

manner, half purposeful and half abstracted, of people who like to hum a tune as they go about some occupation they know to be displeasing to their neighbours. "Tum-ti, tum-ti, tum-ti, tum-ti, tum-ti, tum-ti, tum-ti, tum!" it sang as it strode after the object of its animosity. We were rather nonplussed and the lutino's sex remained shrouded in considerable obscurity as, although it was always "Tum-ti, tum-ti" for the hen and "Ha-ha" for the cock, the precise significance of the difference between the two modes of address was not easy to discern. None of the avicultural literature dealing with the sexing of birds gave me any help at all. As, however, the shape of the lutino's head bore more resemblance to that of the cock Amazon than the hen and the attacks delivered on the latter were a shade less vicious, I decided to remove the cock. He was accordingly placed in an aviary by himself where he seems very happy and amuses us with his conversational and musical accomplishments. Among the latter is a most remarkable song delivered in a voice I hesitate to identify with his late owner's, though, as I believe she told me she had the bird when quite young, I do not know of what other lady's voice it can be an imitation!

For several days it was necessary to shut the lutino up for a few hours in order to give the hen Amazon a chance of feeding in peace and resting undisturbed by the tune of "Tum-ti, tum-ti", but gradually they became more reconciled and at the time of writing, if not exactly on affectionate terms, are quite friendly and unafraid of each other. But probably I shall have to wait until next spring before I can be certain that the two are a true pair.

Besides the Blue-fronted Amazons I had a hen Guilding's and an *Inornata*. The *Inornata* I bought about a year ago as a mate for the Guilding, for I never expected to be able to secure a second example of that rare and magnificent Parrot. The old hen Guilding has been in my possession about fourteen years and was a good time in England before she was offered to me, so she must be a fair age, as, like most of her race, she was adult when first captured, probably by shooting. She was devoted to her first owner, but has never really taken to anyone else, her natural shyness being accentuated by the fact that she is short-sighted, although there is no visible defect in her eyes. My

old friend, Canon Dutton, well-known as an authority on Parrots, used to consider that the great island Amazons were not so hardy as the better known South American species and had little or no aptitude for learning to talk. My own experience has not altogether confirmed his opinions, as my hen Guilding has spent several winters in an outdoor aviary, at one time in a very exposed one, and she has never shown the least sign of illness: I do not think, however, that the big island Parrots are altogether suited to cage life, as, when deprived of exercise, their term of life does not often exceed a few years.

It is true that I have never known but one big Amazon that talked, but this may be due to the fact that the few that have been brought into captivity have nearly always been fully adult when taken. Reared from the nest, they might learn to talk as well as their smaller relations.

Resigned as I had become to the idea that my hen Guilding was probably the first and last of her race that I should ever own, it came as an agreeable surprise this spring when Mr. Seth-Smith told me of another for sale in good condition, but with its appearance rather spoiled by a badly damaged eye. I was still more pleased to hear from Miss Knobel that the bird was almost certainly a young male. I disposed of the *Inornata* and a few days later the new Guilding arrived. He was a great contrast to others of his own and closely allied species that I have known. Instead of being slow and stately in his movements and a rigid abstainer from any form of conversation but his natural calls, he was excessively lively and friendly and a great chatterbox, saying a fair number of words that could be understood and still more that were unintelligible. As he was in fair plumage and in excellent health I soon turned him into the aviary with the hen. The change he highly approved of and life became one huge joke. He raced about the perches at full speed shouting "Abra, abra, abracadabra, abracadabra, what d'yer want? Ha, ha, ha, ha, haaaa!!" and his first rain bath sent him wild with delight. His relations with his intended bride, however, were not idyllic. She was afraid of him and when he unintentionally cornered her in a place from which she could not escape, she bit and swore as though her life depended on it. He,

handicapped by his blind eye, grew angry and frightened in his turn and the result was a most thorough misunderstanding. Bed-time, when they had to be driven into the shelter for the night, usually produced a scene between the two shy and short-sighted individuals. Their conduct reminded one extraordinarily of the peoples of two nations who, with no desire whatever to injure one another by aggression, through complete ignorance of each other's feelings, nevertheless embark on a bitter "defensive war", both parties believing with equal sincerity that life and honour are at stake. The two Parrots, however, were more fortunate than belligerent nations in that they were not denied an opportunity of studying each other during quieter moments. Very soon it began to dawn upon them that they were not out for each other's blood. The cock began to make playful attacks on the hen, and pulled her leg gently, both literally and metaphorically. She in turn learned that he did not mean to hurt her and so by the time I returned from my holiday they had become very good friends and were preening each other's feathers. The cock has not lost his good temper now that he has a mate of his own species and still displays to a human friend by spreading his tail and bobbing his head with the crown depressed, while the pupil of his eye contracts. I fear that I can scarcely expect them to breed, for even if the hen were not too old to lay, would she and her partner ever manage to rear a brood with only one sound eye between them? Perhaps a pair of spectacles might help!

I may add in conclusion that the cock Amazon is already quite famous through the Press. His arrival was mentioned in more than one daily paper and indirectly he was the cause of a rather unkind reference in *Punch* to Mr. Cook of mining fame, who was advised to take warning from the fate of a race of Parrots nearly exterminated by their fondness for sitting on volcanoes! Guilding's Amazon was, of course, nearly wiped out by an eruption in the only island it inhabits.

THE BREEDING OF THE YELLOW-RUMPED PARRAKEET (*PLATYCERCUS FLAVEOLUS*)

By The MARQUESS OF TAVISTOCK

The Yellow-rumped Parrakeet is the scarcest in captivity of all the true *Platyercus*, and its natural habitat appears to be restricted. To those who have never seen one it is best described as a small Pennant with the red of the Pennant's plumage replaced everywhere, except on the forehead, by pale greyish yellow. In the bird books it is often depicted as a beautiful primrose colour, but the Yellow-rump of real life is not, either in England or Australia, a gaudy bird and might appeal to those to whose taste a Rosella is too brilliant. Both my hens have quite a lot of reddish colour on the breast and might almost be mistaken for very pale Adelaides: indeed it is a very open question whether Yellow-rumps and Adelaides are not local races of the same species; or the Adelaide may be a natural hybrid between Pennant and Yellow-rump, now well established and breeding true. My first Yellow-rump was a hen with two toes of one foot missing. She came to me at a time when I was trying to keep most of my Parrakeets at liberty and I turned her with a cut wing into an open-topped enclosure. When her feathers grew she stayed about all right, but before the winter was far advanced she was badly injured in a fight with some other Parrakeet and had to be destroyed. My next Yellow-rump, a cock, reached me a year or two later and I started him in the same way. He was an assertive bird: there were some Pennants in the garden at the time the moult restored him the use of his wings and one of the cocks had a pretty whistle the Yellow-rump soon learned to imitate perfectly. Not content with this plagiarism, he proceeded to appropriate the Pennant's wife and some months later I was only just in time to prevent him murdering that luckless bird with the able assistance of the lady. Not long afterwards the hen Pennant took possession of a hole in an old beech-tree and was no more seen, and it looked as though I should be able to prove whether my theory as to the hybrid origin of Adelaides was correct. Alas! it was not to be: some weeks later the Yellow-rump vanished and inspection of the hole in the beech-tree showed it to be empty. Clearly some

vermin had killed the Pennant on her nest, and her mate had strayed before I realized the need of replacing her.

I did not see another Yellow-rump for very many years, but last winter I was fortunate enough to secure five, three cocks and two hens. They were rough and very wild, but quite healthy and indeed have never given me a day's anxiety. The Yellow-rump is a hardy bird, and is in no respect more difficult to manage than the common Rosella, being very unlike the Tasmanian Yellow-belly (*P. flaviventris*), which is decidedly tricky.

Like most newly imported Australian Parrakeets the Yellow-rumps started to moult soon after their arrival. Being anxious to give them a chance of breeding, and knowing that you can take a certain amount of liberty in the matter of low temperatures with newly imported birds of the genus *Platyercus*, provided their plumage is in good order from bathing and you do not expose them to fog and cold wind, in April I moved the Yellow-rumps from the warm bird-room to the aviaries they were to occupy as their permanent homes. The aviary shelters were heated with a couple of brooder lamps and at first the birds were only allowed out into the flights in the warmest part of the warmest days. The single cock, which was the best one, I left alone, keeping the pairs together that had travelled together. In this I made a mistake, and had I given him a hen I should probably have had two nests instead of one.

The hen Yellow-rumps of the pairs were in better condition than their mates and as summer approached began to show signs of nesting. One pair were much steadier than the other, but it was the cock of the timid couple who first began to feed his hen, and it was she who in June laid four eggs in the nest-box in the aviary shelter. One young bird was hatched and left the nest towards the end of July. It is pale yellowish green on the neck and breast and rather darker green on the shoulders and wings. The blue areas of the plumage are much as in the adult, but perhaps slightly smaller and the red forehead is well developed. The beak is the usual pale horn colour of young birds of the genus. As compared with an Adelaide of the same age the Yellow-rump is much yellower on the breast and rather more blue on the wing.

The young bird is doing well at the time of writing and flies strongly and can find its way in and out of the shelter : the parents are moulting again, as are the other pair which did not nest, partly, I think, because they were interfered with by a Brown's Parrakeet at liberty who fed the hen Yellow-rump through the wire. The cock also fed her, but had not sufficient energy to resent and drive off his rival. I believe the Yellow-rumped Parrakeet has been bred on the Continent many years ago, but I am not aware that it has been bred in England.

THE BREEDING OF THE YELLOW WAGTAIL (*MOTACILLA FLAVA*)

By Captain H. S. STOKES

As a rule I do not keep British birds in my aviaries, preferring to see them in garden, field, and wood, but as this delightful species does not occur locally I sent for a pair, and they arrived just after the general strike.

The cock Yellow Wagtail is a deep greenish yellow and longer in the leg than the Grey Wagtail, which is also yellow, but paler, and is particularly smart and attractive, especially when paddling in the water.

The aviary chosen for them was one just being made, of which only the shed and a small portion of the flight were ready. Into this they were turned, and we busied ourselves with other things.

On looking round a fortnight later we were astonished to find a beautiful nest built on a truss of straw indoors and up against the wall, made entirely of coarse pieces of peat moss litter off the floor and lined with feathers. To this was added some soft hair which I threw in.

Three eggs were laid, but the hen never seemed to sit on them. Finally, in June, when the annual family migration to the seaside took place—always a period of intense activity in aviary building!—the Editor came to see the birds and he agreed that the nest would probably be forsaken and a new one built. For by this time the outdoor flight, 60 feet long by 10 feet wide, against a creeper-covered wall, was completed, with ample nesting cover.

On 12th July I went in to tidy up and to pull out the old nest and was thrilled to find a sturdy young bird gaping up at me for food from the nest. Up till this time, when the young one must have been well over a week old, no live food had been supplied except an occasional treat of mealworms, so the parents must have fed it entirely on insects captured on the wing.

This was particularly encouraging, as there are numerous other insectivorous birds sharing the aviary—Bulbuls, White-capped Redstarts, Orange-headed Thrushes, and Pagoda Starlings.

Thereafter mealworms, gentiles, and freshwater shrimps were supplied in moderate quantities, but still flies seemed to be preferred.

On 17th July the young one left the nest, and a week later was fending for himself.

The species has already been bred by Mr. Teschemaker, as recorded in this Magazine for 1914, page 81, but these scanty notes may serve to remind members of a charming bird to acquire when offered.

AVICULTURE IN GERMANY

Red-billed Hornbills (*Lophoceros erythrorhynchus*) have this year nested at the Berlin Zoo. Recent numbers of *Die Gefederte Welt* give accounts of the event.

The hen was walled up in the cavity selected for the nest, and fed by the cock through an opening left for the purpose, exactly as is the case in the wild; two broods appear to have been hatched, and one young bird lived twenty-one days, a really notable avicultural event despite the absence of complete success. The articles are illustrated with good photos of the male feeding himself, and later his immured mate, as well as of the young produced in two stages of unfeatheredness.

Other illustrations in the numbers of the last few months which particularly appealed to me are a series of photographs of young Budgerigars and Cockatiels from one day old to adolescence, a lovely coloured plate showing *Cossypha caffra*, *Monticola cinclorhyncha*, and *Thamnobia cambaiensis*, and excellent uncoloured portraits of the Emerald Dove, the Red-throated Bulbul (*Rubigula*), Loochoo Robin,

Japanese Robin, and two rare Starlings, *Galeopsar salvadorii* and *Heteropsar albicapillus*.

The first of these is apropos of Mr. Ezra's new acquisition mentioned in the June number of the AVICULTURAL MAGAZINE as new to aviculture, but according to *Die Gefiederte Welt* this species was brought to the Berlin Zoo in 1924. Of the second, the White-headed Spree, three specimens are reported to have arrived in Berlin "new".

Advertisements of "Bengalese" at 12 marks a pair are of interest in connexion with our recent article on Japanese Aviculture and the note on page 226.

I can find no mention of Vol. I of *Aviculture* in any of the numbers I have seen, an omission which must be due to want of knowledge of the work, I think, as the *Die Gefiederte Welt* is usually so well-informed and so all-inclusive in matters avicultural.

E. H.

CORRESPONDENCE

BLACK-CHEEKED AND NYASA LOVEBIRDS

SIR,—It might interest members to know that I have a Black-cheeked hen Lovebird mated to a cock Nyasa sitting on fertile eggs. This really happened by accident.

I had put a couple of either species in adjoining flight cages, and presumed, as they did not make any effort to nest, they were not true pairs. They eventually gnawed their way through, and I then gave the four birds the use of the double flight. A cock Nyasa speedily mated to a hen Black-cheek and within a week she was sitting on eggs and is due to hatch off on or about the 25th inst.

Provided the hybrids are reared it will be interesting to note if they correspond with the specimens Messrs. Chapman imported and which were concluded to be wild-bred hybrids of these two species.

My experiences in breeding Nyasa Lovebirds might interest and be of assistance to other members. I procured several of these birds from the first importation, and was fortunate enough to get at least three true pairs. One pair quickly took possession of a nest-box, laid five eggs, and steadily incubated the eggs. On examination I found all

five eggs containing dead chicks, and presuming the period of incubation to be twenty-one days, they had all died on the 20th or 21st day.

With this particular pair this happened with three nests containing nineteen eggs in all (as soon as one lot of eggs were removed they laid right away).

After a little thought and suggestion from Captain Rattigan, I came to the conclusion that lack of sufficient humidity in the air and low temperature whilst incubating was the cause, and having another pair that had been sitting on five eggs for eighteen days (counting from date first egg was laid) I decided to provide the necessary moisture and every morning soaked their eggs in warm water and lightly sprayed the interior of the nest-box. I was later rewarded with four strong youngsters, which on day of writing are practically fully feathered and ready for flight.

During this operation the Nyasas sat within 2 or 3 feet of their nest and the hen straightway went back to incubate and evidently in no way objected to this interference.

From my observation the parents of this species feed their young on the following: chickweed, seeding grass, oats or groates, and white Spanish seed, first masticated by the parents and given to the young in a thin liquid form. They are fed by both parents frequently and the interior of the nest kept very clean.

The eggs are evidently laid on alternate days as the last young one hatched out ten days after the first but received just as much care and attention as the bigger and stronger occupants of the nest.

As we have had a good importation of a new species which is in every way hardy, attractive in colour, and a very free breeder, we should snatch the opportunity to perpetuate it in our aviaries. An exchange of blood with aviary-bred specimens should be easily arranged, and the possibilities of breeding this tractable species unlimited.

W. R. BEARBY.

A LONG-LIVED CARDINAL

SIR,—I think that you might be interested in my bird, a Scarlet-crested Kentucky Cardinal. I have had him over thirty years, and the lady who gave him to me had him for some time previously, and I

don't think he was a young bird when she got him. He is extremely lively and full of character and habits. He always takes his bath about tea time, and since (many years ago) his particular glass bath (which was a smallish flower vase like a small fish bowl) got broken, he will take it out of nothing but his drinking-pot in which he can only get his head. When not quite up to the mark I give him a drop or two of whiskey in his water, which bucks him up wonderfully. He is now moulting but still most cheerful, with a voice as strong as ever. He does not keep himself quite so sleek as he used to do and his feet give his age away, as they are extraordinarily gnarled and hard. He strongly objects to having his toe-nails cut, bites my finger all the time, and shrieks at the top of his voice, and when done he absolutely chuckles at me, as if to say, "I hurt you jolly more than you did me," which is quite true as he leaves a mark which lasts nearly an hour. He knows people—old friends he always has a pleasant word for. I hope I am not worrying you by this long letter about my bird. My birds have always lived long: a Greenfinch $19\frac{1}{2}$ years and a Canary $12\frac{1}{2}$.

(MISS) A. M. HARRISON.

THE DERBYAN PARRAKEET

SIR,—I have read with much interest the article on, and seen with much pleasure the fine coloured plate of, the Derbyan Parrakeet in the June number of our Magazine. This is the favourite Parrot of the Chinese, and he is generally kept by rich people who hang up one or two of them in their halls or gardens. The poor birds are kept as almost all Parrots in Chinese hands, on swings made entirely of metal, perch and all, and are generally fed on dry paddy.

Keeping such a lively bird chained up and feeding him on such a monotonous diet, certainly does not increase the happiness of the Parrot, but still I have known examples living for many years and looking in very good condition. The Chinese consider this Parrakeet a good talker, but all the birds I have come across only spoke a few words in Chinese. These command high prices, as the Chinaman is very fond of talking or whistling birds. I am rather surprised that

the Derbyan Parrakeet is such a *rara avis* in Europe. A few examples are always to be found on our bird market and sometimes, generally during the early autumn, this species arrives in quantity and I have seen as many as twenty in a birdshop, all tied to a bamboo frame and looking not exactly happy. Pere David states that this Parrakeet comes from Nepal and Arracan, passing during the summer to the wooded valleys of the upper Yantze, via the province of Szechuan, where the Chinese capture him and bring him in quantities to Chentu, the capital of this province. He does not mention Hainan as its habitat, but credits this island as the fatherland of *Palaeornis lathamii*, a species somewhat similar in colour to the Derbyan, but much smaller.

If one asks the Shanghai dealers where they get their birds from, they invariably reply "from Szechuan"; in this instance they seem to be correct, but generally they name this province as the abode of any rare or gaily coloured bird. One even assured me that his Swainson's Lorikeets came from there.

A. HAMPE.

SHANGHAI.

A HERMAPHRODITE GOULDIAN FINCH

SIR,—About eighteen months ago I secured a freak Gouldian Finch, one half is the colouring of a cock and one side that of a hen. One side of the head is red, the other black. When it turns one side, you are looking at a red-headed cock bird, and the other side a black-headed hen. The colouring is perfect. It has moulted, but still remains the same. This year I put a Red-headed cock with it and to my surprise I found they nested and had eggs but they were infertile, so *it* must be a hen. It would be interesting to know if a case like this has been known before.

S. HARVEY, JUN.

[Similar cases have been recorded in birds, but they are rare and we do not think a hermaphrodite Gouldian Finch has ever before been seen.—ED.]

MORE CONCERNING HOODED PARRAKEETS AND THEIR ALLIES

SIR,—Towards the end of August, by a happy accident, I met Mr. A. le Soeuf, of Sydney, in the Bird-room at the South Kensington Natural History Museum, and from a few minutes' somewhat hurried conversation I understood that for some time past he had had quite a considerable number of Hooded and some Golden-shouldered Parrakeets under observation in aviaries; that the coloured shoulder-patch differed in the two birds; that though both raise their head-feathers, each does it in quite a different manner; and, that he has come to regard them as different species rather than local varieties.

Unfortunately our hurried chance meeting did not permit of his dilating on these and possibly other points concerning them.

I would suggest that Mr. le Souef be asked to write an account of whatever differences and similarities he has noticed, as the information would be of great interest.

Concerning the editorial note that colour varies with age: that, of course, must be recognized, and may account for some of the differences, but if the orange lower abdomen and under tail-coverts be the juvenile type (and we know it is, from the specimens recently at Mr. Chapman's and also from the partly moulted immature skins sent by Capt. Wilkins to the Natural History Museum recently), then the brown-headed bird Miss Clare had would seem to have been a young one, and the brown hood not therefore a sign of old age.

EVELYN SPRAWSON.

[That the Hooded (*P. dissimilis*) and Golden-shouldered Parrakeets (*P. chrysopterygius*) are distinct species there can be little doubt, especially since the differences were pointed out by Messrs. le Souef and Kinghorn in the *Emu* of July, 1924. But Captain Sprawson, in our last number, suggested that there might be more than one race or sub-species of *P. dissimilis*, the Hooded Parrakeets, which was first described as having (in the male) a *brown* hood or cap, whereas in subsequent examples this has been *black*. Captain Sprawson's statement that he saw a male with a brown hood has raised the question as to whether there may not be two races.—ED.]

YOUNG PARROT FINCHES

SIR,—In spite of the fact that I have four cock Parrot Finches to one hen and that there are over fifty other birds in the same division of the aviary (flight 30 by 14 feet) three young Parrot Finches left the nest on 17th August. The most forward of the young birds has to-day, the 20th, a band of bright red feathers on the lower part of the brown patch which the young show on that part of the breast, which will eventually be red. I have notes in my journal saying that I bought Parrot Finches off Chapman on 13th June, 1925, and last February, and that some of them had no red on the breast, yet they must have been older than these, two of which could hardly fly on the 17th.

I have seen statements, somewhat loose, that the young on leaving the nest are coloured like their parents, but that is generally contradicted by others. I notice that their tails show red and that there are some blue beads at the base of the beak, something like those found in young Gouldian Finches only not so large. I also noticed three blue beads at the base of the beak of some young Black-faced Quail Finches which unfortunately died in the nest.

H. L. SICH.

[In the AVICULTURAL MAGAZINE for December, 1905, the present Editor published some notes on his experience in breeding Parrot Finches, of which he reared a number, and the following paragraph may be quoted apropos of the observation made by Mr. Sich.

“The young birds have the sides of the mouth ornamented with four brilliant blue beads which appear to be semi-luminous, at any rate they are visible in the darkness of the nest when all else seems blackness, and there seems little doubt that they enable the parents to see where to place the food, for when the old bird stands in the small entrance-hole the young birds are practically in darkness. When they leave the nest the young birds are a dull green with tail dull reddish, and a certain amount of red on the face. The extent of this latter, however, varies very considerably, some having practically none while in others the face is nearly as red as in a poor adult specimen. The young birds have the lower mandible of the bill bright yellow, while the whole bill is black in the adult.”—ED.]



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IN FREEDOM & CAPTIVITY

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A BLUE ALEXANDRINE PARRAKEET

By ALFRED EZRA, O.B.E.

Nowadays one sees beautiful varieties of yellow, blue and other coloured Budgerigars. Originally these freaks were due to accidental variations, but they have been established by several breeders. Similar freaks also occur in birds in their wild state, particularly in those of the genus *Palæornis* of India. For many years I have had in cages different specimens of lutinos of the Blossom-head (*P. cyanocephala*), the Ring-neck (*P. torquata*), and the Alexandrine Parrakeets (*P. nepalensis*). Although these birds are very rare, the blue specimen, which is their counterpart, but in which the yellow tinge has entirely disappeared, is rarer still. Up to the present I do not know of any blue varieties with the exception of two specimens, the one illustrated so accurately in the accompanying plate, and a male Ring-neck (*P. torquata*) of similar colour belonging to Mr. M. G. Mullick, of Calcutta. I need not elaborate on the beauty of my bird, of which Mr. Gronvold gives such a true and accurate portrait. It is a male and belonged to my brother, Mr. David Ezra, of Calcutta, and as far as I know he was taken from a nest in the wild state. He was with my brother for about a year and then I brought him here over two years ago. For the first six months I kept him in a cage, but since then he has been in an outdoor aviary measuring 20 ft. by 6 ft. For companion he has a female lutino of the same species. They have flourished out of doors during the

last two winters, which have been most severe. They are very attached to one another, and the hen laid twice last season, once at about Christmas time and again in February. Unfortunately the eggs were clear in both cases. It is interesting to note that, while the two known blue *Palæornis* are males, the lutinos are almost always females.

Several lutino Ring-neck hens, mated to normal coloured green cocks, have bred in aviaries, but all the offspring so far have been green. Should the offspring breed, let us trust some of the young will be yellow. I hope next season to mate my blue bird to a normal green hen, and the lutino hen to a green cock.

BLACK-HEADED SIBIAS

By A. SHERRIFF

I gave last year an account of the breeding of the Black-headed Sibia, and hope that the following details of a further partial success in breeding these birds may be of interest.

The early part of this year was, in London at any rate, cold and wet. The four Sibilas, two adult and last year's two young ones, had been kept in the largest breeding aviary but apparently the birds were not inclined to breed together. Unfortunately, I had omitted to ring the young birds, and found that I could not distinguish which were which. After many different sortings I left what I thought to be the parent birds in the aviary with a pair of Superb Sps.

The Starlings went to nest at once, and soon after the Sibilas were seen to be carrying hay into the nest-box. Whether they were copying the Starlings it is impossible to say, but it was surely a strange place for birds of this class to nest.

The attempt, if such it was, however, was soon nullified as the Starlings denuded the nest-box of everything the Sibilas had put into it, and from that time until I moved the Starlings the Sibilas made no further attempts to build a nest.

About a fortnight after the Starlings had been moved (about the 26th May), the Sibilas started to build about 5 ft. above the ground in a small tree and in a most exposed position. Two eggs were laid and in spite of the bad weather, there was some heavy rain, the birds sat

very closely. Exactly fifteen days after incubation commenced the young (one only) was hatched.

From the experience gained last year I felt pretty certain that unless the young bird died the Sibilas would not leave the nest for any length of time, so on the morning that the young one was hatched, a hole about 18 inches square was cut in the wire netting just near the nest, and a perch put up for the birds to alight on. Within two minutes the cock bird was out in the garden. Soon after that the gardener next door rushed up to tell me one of my birds had escaped. Shortly after the cock was busy chasing the two young Sibilas in the adjacent aviary.

The first day was rather an anxious one, particularly as I had to leave home for the day, and on my return the cock was nowhere to be seen. The gardener, however, was very reassuring, and told me that the birds had been busy feeding and had even refused mealworms, so that apparently they were finding plenty of suitable food.

For the first week mealworms were entirely disregarded; but subsequently the hen, possibly a little too lazy to go far, would condescend to take a few from the path outside the aviary. Both birds were impudent even to the extent of entering the greenhouse for spiders and at times came down and partook of cake at tea-time.

The question now arose what was to be done when the young bird left the nest. I did not want to shut the parent birds up in the aviary again, and hoped that when the young one had left the nest it would stay in the aviary, but this hope was doomed to disappointment, for on the morning of the 17th day after hatching the young bird had been enticed out of the aviary by the parents.

I had to decide whether to risk losing the lot or to shut them up, and I decided on the latter. The young bird was easily caught and put back in the aviary, where the parents immediately followed and the hole was wired up again.

Now comes the strange part of this story. In spite of the fact that plenty of mealworms were given, the parent birds refused to feed the young one, and we found it dead the next morning. It was a sad ending to what promised to be an interesting experiment.

I have often wondered what would have happened had I left the birds out. I believe that the two parent birds, at any rate, would have

returned to the aviary, but fear that when the young bird was in a position to feed for himself, they would have driven him away. I propose to try again, however, next year, and leave them out.

It may be of interest to mention that the garden is within 4 miles of Charing Cross and the Finchley Road along which buses, etc., are continually running is only about 300 yards away.

Many years ago a number of these birds were loosed in Kent in the hope that they might become part of the population, but apparently they were newly imported birds and nothing resulted ; but there appears to be no reason why they should not be acclimatized, as I have found them very hardy.

I never found out how far the birds went away from the aviary, but that they enjoyed their freedom is unquestionable.

Has this experiment ever been tried with insectivorous birds before ? I know the Marquess of Tavistock does quite a lot on these lines with Parrots and Waxbills, but have never seen any account of an insectivorous bird being allowed its freedom. It will be readily realized that if this can be done successfully the food problem of the young chicks is reduced to a minimum.

As an example of the difficulty of rearing insectivorous birds, my Blue Robins have nested twice, three chicks the first time and four the second time, but never succeeded in rearing any, which is very disappointing. In each case the young birds left the nest and died soon after from what appeared to be rickets. This in spite of the fact that mealworms were augmented with hundreds of spiders. Has anybody had this experience with Blue Robins, and if so have they been able to overcome it ?

NOTES ON BIRDS OF MOUNT SELINDA

By SYDNEY PORTER

(Continued from p. 273)

Hartlaub's Shrike (*Dryoscopus guttatus*). This Shrike is fairly common but is not often seen, owing to its habit of frequenting the dense bush and jungle : its plumage resembles that of the Mozambique Shrike

(*D. mossambicus*) except that most of the secondary wing feathers are edged with white whereas the Mozambique has only two edged with white.

Its song consists of a series of low, rich flute-like notes.

The Lesser and Greater Puff-back Shrikes (*D. cubla* and *D. ferrugineus*). Both of these birds are very common and haunt the wooded kloofs and sometimes the forest itself, where their cries at once attract one's attention, the commonest cry being "Beat-you-well", but they have many other calls, another one being "Are-you-well", these calls are remarkably clear and loud, and are one of the characteristic sounds of the forest.

When displaying to the hens, the cocks puff out the loose downy feathers on the back until they look like black and white balls of down and chase the hens from tree to tree with a very peculiar jerky flight, rather like that of a Weaver bird when displaying.

Bush Shrike (*Chlorophoneus nigrifrons manningi*). These wonderful birds, perhaps the most beautiful of all the Shrikes, are really East African birds, but I have seen them at Selinda. They seem to be exclusively forest birds, though I once saw an odd one in a tree by the homestead. They live only in the tops of the tallest trees in the forest and when in the dark foliaged mahogany-trees, they look like balls of orange flame flitting about. Their behaviour strangely resembles that of the Black-backed Weaver, and I have frequently been confused between the two birds, for their breasts are practically the same colour and it is impossible to see the upper part of the bird from below. These shrikes have a remarkable series of rich full notes which are impossible to describe.

They are usually found in company with other birds, at least that has always been my experience, in the little parties of Warblers, Bulbuls, etc.; which move about the forest with the Drongos. In colour this bird is blue grey on the head, nape, and the upper part of the mantle, a narrow frontal band and also a stripe from the base of the beak to the nape, including the lores and ear-coverts, jet black. The upper parts bright olive green, the tail feathers all but the central ones, tipped with yellow, the under parts rich golden orange, going into olive yellow on the flanks and pale yellow on the under tail-coverts.

The beak black, the legs blue grey. The female has the same arrangement of colours as the male, but they are duller.

The Orange-headed Bush Shrike (*Laniarius sulphureipectus*). Another of the brilliantly coloured Shrikes, a most beautiful creature, which is occasionally seen in the wooded kloofs. I frequently saw it in the large trees which surrounded the vegetable garden of the homestead on the mountain slopes. Upon observing one for the first time it appears to be exceedingly shy and crouches motionless on a bare branch on a tree, meanwhile making itself as slim as possible, and when in that position rather resembling a Bee-eater more than a Shrike. But after a time, when it sees that no harm is meant, it comes quite close, hopping quite unconcernedly about the trees making a thorough search for the insects upon which it feeds, and occasionally giving utterance to its astonishing notes.

Southern Grey-headed Bush Shrike (*Laniarius starki*). This large and richly coloured Shrike can only be observed by very patient watching, for it seems only to inhabit the dense tangled undergrowth by the mountain streams, where it creeps about in search of insects. One of these birds I had under observation for a considerable time in a large fig-tree : it kept hopping up to a hornets' nest, seizing an insect each time but running it up and down its beak for a long time before swallowing it.

Like the rest of the family, this bird has an amazing repertoire of rich flute-like notes.

The Bertrand Bush Shrike (*Laniarius bertrandi*). A beautiful bird but by no means as brilliantly coloured as the rest of the family. It is found rather sparingly in the dense parts of the forest, where it utters its peculiar song from the middle of a thick mass of tangled creeper at the top of a huge tree. This bird seems to be migratory, for it is only heard and seen at certain times of the year. It goes about in pairs.

The Zambesi and Smith's Helmet Shrikes (*Sigmodes tricolor* and *Prionops talacoma*). These two strange birds are both found on the wooded slopes of Mount Selinda but in habits they differ greatly ; the former is shy and wary and frequents the dense trees, the latter is extremely tame and confiding and will sit preening its feathers within a few yards of one.

Both birds are found in small parties and are extremely garrulous, as all the Shrikes usually are. As well as insects I have seen these birds capture small lizards and eat them, but before swallowing them they batter them about on a branch for a considerable time. The peculiar red wattle which surrounds the eye of the Zambesi Helmet Shrike makes the birds look at a distance as though it has sore eyes. I think that this wattle is unique among birds.

The Black-capped or Layard's Bulbul (*Pycnonous layardi*). This is by far the commonest bird on the mountain and in the Selinda district, every bush and tree seems to be inhabited by them: if a census could be taken I am sure it would number tens of thousands. These Bulbuls are omnivorous in their diet, feeding upon fruit, insects, honey, berries, and even flowers.

Reichenow's Bristle-necked Bulbul (*Phyllostrophus strepitans*). This is a very rare bird and is very seldom seen; it associates in small parties, and lives low down in the dense bush on the edge of the forest, where its presence can always be detected by its loud chattering cry.

The plumage of this Bulbul is very sombre and it superficially resembles a large brown Warbler rather than a true Bulbul.

The Yellow-streaked Bulbul (*Phyllostrophus flavistriatus*). These Bulbuls are essentially birds of the forest and are seldom found outside its confines. They are found in small parties passing from one part of the forest to another, searching the trees and undergrowth for insects.

They show remarkable agility in running up and down the trunks of the large trees, but I noticed that they only did this on the trees which had a rough bark or were covered with moss or lichen, thus giving them a good foothold.

I have often seen these birds pulling to pieces the bunches of dead leaves which had accumulated in the foot of trees or in the bushes below, or in the dracæna heads; they do this in search of spiders and insects. I have also seen the birds pull the bark off the creepers and the trees, and they were invariably rewarded by some titbit.

These Bulbuls have a very curious habit of alternately flicking the wings when searching for insects; raising first the one and then the other over the back.

This species, like the rarer Malanji Bulbul, is very fond of grubbing

about in the dead leaves on the ground ; at first I was greatly puzzled by the sound of rustling leaves always so close at hand, but I was always unable to see any living creature and it was only after patient watching that I discovered it was these birds. When they discovered that they were being watched they would remain perfectly motionless and as the plumage harmonized so perfectly with their surroundings, it was well nigh impossible to detect them.

The call of this Bulbul is a clear full note and sometimes it will run these notes together, thus forming a kind of a song ; occasionally one hears the true song of this bird which is composed of remarkably rich flute-like notes and is quite the finest song of any of the Bulbuls.

These birds are experts in catching insects on the wing, and at times when the forest is full of a species of small white moth the Bulbuls can be seen chasing and catching them in mid-air with great agility.

They are also fond of chasing each other through the forest uttering their remarkable loud ringing notes.

During the month of October I have seen the Bulbuls carrying beakfulls of fine roots no doubt with the object of nest building, but though I have searched most diligently, I have never succeeded in finding a nest, which I believe is a small structure placed between the leaves in the head of a dracæna.

In colour the Yellow-streaked Bulbul is dull olive above, the head dark grey, the throat white, below, pale grey finely streaked with pale yellow, getting deeper on the flanks and sides.

The Malanji Bulbul (*Phyllostrophus milanjensis*). These green Bulbuls whose real home is on the high Milanji Plateau in Nyasaland, are found rather sparingly in the Mount Selinda Forest. They are quite forest-loving birds but they do not keep exclusively to the forest as does the Yellow-streaked Bulbul, for examples may sometimes be seen in the dense jungle growth on the lower slopes of the mountain and also in the kloofs.

These birds usually live near to the ground and are fond of rooting about in the dead leaves in search of insects ; they very seldom fly for any distance, but hop from branch to branch in the thick undergrowth.

They are not nearly as lively or as entertaining as the other Bulbul

but are very quiet and unobtrusive : though easy to approach and watch when one finds them, they quietly slip away should one approach too closely.

I have never seen them in parties, but nearly always in pairs or singly, though sometimes an individual will be in a party of the Yellow-streaked Bulbuls.

I have seldom heard them utter a note, in fact they are the quietest birds of the forest.

The general colour of the Malanji Bulbul is a very rich olive green, yellower below, the outer webs of the flight feathers yellowish green, the head dark grey, the throat light grey, the feathers of the ear-coverts have a central white stripe, the eyebrows white, the upper breast feather with a greyish streak, the legs and beak black, but the soles of the feet are bright yellow, the eye is large and dark brown.

In the sunshine the bird's plumage, which looks very sombre in the gloomy light of the forest, assumes a most beautiful moss green shade.

The Mount Selinda Wren-Warbler (*Spiloptila chirendensis*). This very rare, delicate, and fairy-like Warbler is found only in the Forest of Selinda, and in the small forest patches on the neighbouring hills and mountains. It is a very illusive little bird and frequents only the foliage at the top of the high forest trees and seldom if ever ventures down into the undergrowth, as does its congener, the more familiar Bar-throated Warbler. It keeps in parties composed of four or five individuals and makes a minute search of the leaves for the tiny insects upon which it feeds, passing from tree to tree and uttering all the time a series of low notes. Sometimes the birds will playfully chase each other from branch to branch with their feathers puffed out and tails spread.

This is the smallest bird which I came across in Africa, its body is not nearly as large as that of the smallest Sunbird, but the loose fluffy plumage and exceedingly long tail make the bird appear much larger than it really is.

In colour this bird is delicate grey, almost white below, and it is so slim that it could be passed with ease through a small finger ring.

The Bar-throated Warbler (*Apalis thoracica*). This beautiful little Warbler is found on the edge of the forest where it at once attracts one's attention by its loud note. It is the most confiding bird that I

ever came across, and upon seeing a human being it will at once come within a few feet, hopping about the bushes eyeing one from every angle, and uttering its chattering notes. This Warbler is usually found in pairs, though it is occasionally seen in small parties.

It makes a strange clicking noise with its wings as it flies from tree to tree.

The Cape Thrush (*Turdus olivaceus*). A local variety or subspecies of this Thrush inhabits the forest, it is much smaller and very much darker than the typical Cape Thrush.

It is only found in the deepest recesses of the forest, where it lives principally on the ground in the shelter of the thick undergrowth and searches amongst the dead leaves for the insects which constitute its main food.

I have seldom seen it, for as well as only inhabiting the most inaccessible parts it is exceedingly shy. Very occasionally I have seen individuals in the high trees, but this is only at certain seasons of the year.

Peter's Thrush (*Turdus libonyanus tropicalis*). This beautiful Thrush is fairly common, and one or two are always sure to be seen in the tangled bush by the mountain streams. It is not at all a shy bird and will sometimes burst into a rich melodious song whilst one is watching it.

The most noticeable feature of the bird is its bright orange beak.

The nest, rather a meagre affair, is placed between the fork of a tree and is almost impossible to detect owing to the material harmonizing so well with the trunk of the tree; it is like the nest of the European Thrush but is shallower and covered on the outside with lichen and bits of bark.

The call is rather Finch-like, the birds continually answering one another. The Peter's Thrush is subspecies of the better known Kurrichaine Thrush (*Turdus lil'onyanus*).

Swynnerton's Robin (*Erithacus swynnertoni*). This rare and very beautiful Robin is found in the dense thickets in the Selinda Forest where it hops and creeps about the undergrowth. It was discovered by a Mr. Swynnerton, who for some years resided near the forest, and was described in the *Ibis* for 1907. He described it as common, but

during the period that I was there I found it far from common, seeing perhaps on the average two pairs of birds each time that I went into the forest.

The birds are usually found in pairs, and their presence is easily detected by the fact that they are continually uttering a low twittering note. There is a kind of forest cricket which makes a noise almost identically the same, and I have frequently been deceived by it.

These birds are strikingly tame and confiding, but are very difficult to watch on account of the dense undergrowth.

In demeanour they very much resemble the European Robin, and always keep either on the ground or on the low branches very near to it. Upon seeing a human being they will approach within about three yards, uttering all the time their curious low twittering, and when they have had a good look at the intruder they disappear again into the tangled vegetation.

The tail is carried at an angle of about 45 degrees over the back, and is continually jerked up and down, thus making the white under tail-coverts very conspicuous.

The nest is placed between the leaves of a dracæna head.

The food consists of insects which are found in the rotting vegetation on the ground.

In colour, the male is olive green above, browner on the wings, and grey on the wing coverts, the head and throat are grey, below the white throat is a white band, and below this a black one, the underparts are bright orange, the under tail-coverts pure white, the female is the same but not so brightly coloured.

The Angola Rock Thrush (*Monticola angolensis*). This bird is only an occasional visitor to the Selinda district, though it sometimes breeds there, the breeding season being August. It is seldom found on the ground as with most of the Rock Thrushes, but nearly always in the trees. It is a quiet and unassuming bird and is consequently very seldom seen. I once saw one vigorously chasing a female Black Cuckoo Shrike from tree to tree. It seems to be an extremely rare bird in the whole of South Africa.

The general colour of the male is slaty grey, marked with black above, the throat and breast light grey, unmarked, the lower parts

light chestnut. The female differs considerably, the whole of the upper surface being of a mottled brown colour without a trace of grey.

The White-starred Bush Robin (*Tarsiger stellatus*). I only saw this species once perched in a high tree in the forest. This is rather unusual, for this bird, like the previously mentioned Robin, is practically terrestrial, living in the thick undergrowth and searching amongst the dead leaves for insects. It is a very shy and retiring species, and is no doubt more plentiful than is supposed.

The Natal Yellow Flycatcher (*Chloropeta natalensis*). The demeanour of these beautiful little Flycatchers rather resembles that of the Warblers, which birds I first mistook them for.

They frequent the bracken and grass-covered spots on the edge of the great forest, seldom if ever perching upon the trees, but upon the bracken and grass stems. They are invariably found in pairs.

Both birds have a very peculiar short song which is uttered at frequent intervals and resembles the song of a warbler.

In colour both birds are olive green above, the feathers of the head being full and loose, forming a crest, the under surface is bright yellow with a greenish tinge. The legs are black, also the upper mandible, the lower one being brown. The beak is very broad and compressed.

A Flycatcher, which I could not identify, is conspicuous not on account of its colouring, which is very sombre, but on account of its demeanour, for it is usually seen in a very agitated state climbing about the creepers which hang from the forest trees, fanning its wings and tail.

These little birds seem to be in a continual hurry, and give one the impression that life for them is just one long hustle.

They are always found in pairs and keep very close to each other.

This is a very tiny Flycatcher, the smallest I have ever seen, the long fluffy plumage making it appear much larger than it really is.

In colour it is blue grey, the head which is crested is jet black, the tail greyish black, the outer feathers tipped with white, the outer edge of the first two being white. The centre of the abdomen, light grey. The male and female are similar.

The Nyasa Flycatcher (*Balis dimorpha*). This is the common

Flycatcher of the forest and can be seen and heard everywhere. It is extremely tame and very inquisitive and upon seeing a stranger it will approach within a few yards uttering all the time its strange alarm note.

Usually it is found in pairs, though at some seasons it associates in small flocks, and travels from one part of the forest to another, the birds chasing each other from branch to branch singing meanwhile a peculiar low song, or after the males have playfully chased each other, they sometimes have a singing contest, sitting side by side they trill their hardest.

Of all the forest birds I prefer this one, it seems such a companionable kind of a creature.

In colour it is a mixture of rich chestnut, black, grey, and white, the female differs in the arrangement of the colours.

The Lead-headed Flycatcher (*Terpsiphone plumbeiceps*). This bird differs only from the Paradise Flycatcher in the colour of the head.

It is far from common and is occasionally seen in the wooded kloofs, flying with light airy grace from tree to tree, its extraordinary long tail feathers streaming behind.

This Flycatcher has a harsh but very distinctive song which it utters as it flits about amid the branches.

When the male displays he chases the female from tree to tree, and upon getting near her, he lifts up his long tail so that it forms an arch, sways from side to side, and sings his discordant lay which no doubt is sweet to his better half's ears.

From October these birds become more plentiful, coming down from the North.

They are extremely restless creatures, and are continually on the move, passing from tree to tree the whole day through.

Drongo (*Dicrurus spec. ?*). There is a Drongo which is very common in the forest of Mount Selinda, and it seems to be intermediate between *D. afer* and *D. ludwigi*, but differs from both in having the under wing and the under tail-coverts spotted with white. Its whole demeanour differs from that of the Square-tailed Drongo, a bird which I was very familiar with in Mashonaland. Its calls are entirely different; also I have never come across a bird with such a variety of notes. Sometimes this used to be rather annoying, for upon hearing what I thought was the

call of a new bird in a dense part of the forest, I would stalk it sometimes for hours, getting nearly torn to pieces meanwhile in the terrible "wait a bit" creepers as the Dutch call them, only to find that it was this Drongo.

There is a very interesting description of this bird in the *Ibis* for January, 1907. It is described as *D. ludwigi*, and it tells how this bird acts as a protector of the other forest birds. Perhaps I may be forgiven for quoting it in full:—

"It possesses to the full the bold habits and loud and varied cries of its near relative *D. afer*, and quite takes its place in Chirinda (Selinda) as the 'Induna yezinyone' (General of the Birds), for not only will it defend the rights of its own fellows, but is also perfectly ready to play the knight errant to any forest damsel in distress. Only the other day upon going up to a sapling in which a *Haplopetia* was sitting upon her eggs I was vigorously assailed by a pair of Drongos, which flew straight in my face and only turned back when a yard from me, they were backed by noise rather than action by a family of Bulbuls, yet the Doves are not of the Drongo clan."

Personally I have never seen the Drongos defending the other birds, but I have always noticed that where ever a pair of the Drongos were there were many other species of birds, forming a very mixed party, and roaming together from one part of the forest to another. *

These parties were composed mostly of Warblers, Shrikes, Bulbuls, Flycatchers, and Black-backed Weavers.

The Black Cuckoo Shrike (*Campophaga nigra*). The Cuckoo Shrikes are a strange class of birds and though they resemble in some ways both the Shrikes and the Cuckoos they are allied to the Drongos. The Black Cuckoo Shrike might easily be mistaken for the Square-tailed Drongo and many times I have had the greatest difficulty in distinguishing between the two birds. In size and colour these birds are almost identical, but in demeanour they are entirely different. The present bird lacks the light butterfly flight of the other bird, neither has it the habit of returning to the same perch as does the Drongo after its frequent aerial excursions after insects; also the Cuckoo Shrike is usually accompanied by his very strikingly coloured mate.

The Cuckoo Shrikes, though inhabiting South and East Africa, are

far from common anywhere in those regions, they are quiet birds, and do not obtrude themselves upon one's notice, they live in the thick trees and spend most of their time searching the insects which constitute the main portion of their food.

Hartlaub's Cockoo Shrike (*Campohaga hartlaubi*). This bird is unique on account of the great difference in plumage between the two sexes, whereas the male is glossy blue-black with the lesser and median wing-coverts bright lemon yellow, the female is a striking mixture of grey, white, and brown, heavily barred with black and washed all over with bright yellow, brightest on the flanks and back. One seeing these birds for the first time would think that they were entirely different species.

They seldom make any sound and live in the dense vegetation by the mountain streams, and are seldom seen except in the early morning, when they are busily engaged in searching for insects.

The Black-chested Cuckoo Shrike (*Graucalus pectoralis*). This is a very shy and retiring species and moves about in the tops of the trees, it also catches insects on the wing after the manner of a Drongo. This bird resembles a Shrike more than any other member of the family, possibly this is owing to the pale grey plumage.

The only note that I have heard both sex utter is a clear, thin, but very melodious piping whistle, though at times the male bird will lengthen himself out, give utterance to a peculiar low metallic note.

I once saw a pair of these birds take possession of a large tree and drive away every other bird in the vicinity, once they had a very tough fight with a Black-headed Oriole. After the birds had kept this up for a considerable time, they departed.

The colour of this Cuckoo Shrike is a very pale French grey, darker on the throat, the under surface is pure white, the central tail feathers are grey, the rest blackish tipped with white. The tail coverts are very long, and almost cover the tail. The gape is exceedingly wide.

The Grey Cuckoo Shrike (*Graucalus caesioides*). I found this bird very much shier than the Black-chested Cuckoo Shrike, and also very hard to observe, for it only frequents the tops of the tallest forest trees, where it searches for insects.

It always goes about in pairs.

In colour it is a uniform slate grey, lighter on the head, the lores are black.

The Blue Swallow (*Hirundo atrocærulea*). These beautiful little Swallows are fairly common about Mount Selinda, but their appearance is very erratic. Some days they will be seen the whole day through, but at other times they will disappear for a week or two. When flying the under wing-coverts appear to be white, but this is due to the fact that the shafts of the flight feathers are that colour.

Like the rest of the family these birds are wonderfully agile on the wing. Their flight is so light and buoyant that they appear more like feathers blown about by the wind than birds.

Sometimes they skim the surface of the water, catching flies and other small aquatic insects which walk on the surface.

The Blue Swallow, as its name implies, is a beautiful dark shining blue over the whole of the body.

The Smaller Stripe-breasted Swallow (*Hirundo puella*). These birds are seldom seen but when they do appear they are usually seen with the Blue Swallows circling round and round at no great distance from the ground, hawking for small insects.

They settle at frequent intervals on the trees, and give utterance to a low twittering song.

The Scimitar Bill (*Rhinopomastus cyanomelas*). These strange little birds are often seen running about the trunks and branches of the trees after the manner of a Tree-creeper.

I once saw one of them dispose of a very large hairy caterpillar, it must have battered it about for at least a quarter of an hour on a branch, possibly to get rid of the hairs before swallowing it, an operation which in itself seemed to be a great effort.

It is simply wonderful how advantageous the long thin curved beak is, it enables the bird to probe into holes and fissures in the bark of the trees in search of insects which it would be quite unable to reach if its beak was straight.

Nightjars are very common indeed on Mount Selinda, I observed three species, namely the Rufous-cheeked (*Caprimulgus rufigena*), the Fiery-necked (*C. fervidus*), and the Standard-winged (*Cosmetornis vexillarius*).

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These birds are seldom seen during the day unless one puts them up out of the grass. At night they are very active, and I have frequently caught them with the aid of a hunting lamp; they are blinded by the brilliant light and can be picked up on the road.

The Standard-winged Nightjar is fond of lying in the sandy wagon track which runs from Mount Selinda to Chipinga, and upon the approach of a motor-car, a rare occurrence in that part of the world, the bird gets into such a state of confusion owing to the glare of the headlights that it almost gets tangled up in its extraordinarily long wing feathers (these feathers are only worn in the breeding season, and are between 2 and 3 feet long, and look like two white ribbons tied on to the bird).

The Cinnamon Roller (*Eurystomus afer*). This remarkably handsome bird I have seen but a few times. It frequents the tops of the thickly foliated trees, and it differs very much in its habits from the other Rollers in being very inobtrusive, whereas the others love to flaunt their beauty before every eye.

These Rollers are very hard to see when in the trees, their plumage seeming to harmonize so well with their surroundings, but their presence can usually be detected by the harsh croak which they utter at frequent intervals during the day.

I have several times observed a pair of these birds sitting on a branch about a foot away from each other, and each one alternately throwing back its head and making a very peculiar gurgling sound, which seemed to run right down the scale; this noise is made deep down in the throat with the beak closed. The other cry or croak, though not loud, is extremely penetrating and can be heard from a great distance.

(To be continued.)

BRAZILIAN RAILS NESTING (*ARAMIDES* *YPECAHA* AND *ARAMIDES* *CAYENNENSIS*)

By W. SHORE BAILY

Water Rails, although fairly frequently imported, are not great favourites with Aviculturists. For one thing, if it is wished to breed them, fairly roomy natural aviaries, with a good supply of water, is

essential. On the other hand, if only required as pets, and very charming pets they make, they can be kept under almost any conditions.

They are very hardy and are practically omnivorous, so, of course, are very easy to cater for. They are, however, liable to get their feet frostbitten in very severe weather, and are better kept under shelter whilst these conditions prevail.

At the beginning of last season I had two pairs of the small Cayenne Wood Rail (*Aramides cayennensis*) and one pair of the much larger Ypecaha Rail (*Aramides ypecaah*). I turned these into a fair-sized aviary, about one-third of which consisted of a pond, heavily overgrown with bullrushes and other aquatic plants, and bordered on one side by a thorn hedge about 6 feet high. Both the cock Wood Rails were extremely tame, and were very fond of being handled and petted. The cock Ypecaha was also tame, and would feed from the hand, but all three hens were extremely wild and were never seen. When they had been together a week or two the two Wood Rail cocks had to be separated, as they were continually fighting. When in action they are very much like two long-legged Bantams, striking at one another with their feet, and gripping each other's necks with their powerful beaks. When equally matched they do each other little harm, but if one bird is markedly weaker, he is pretty certain to be killed. When one cock had been removed the other promptly made friends with the tame Ypecaha. I expected now that I had made a mistake in the sex of this bird, as I frequently saw them caressing each other, and it was not long before they were obviously mated. It appears that as in most cases in the Limicolæ, the female is considerably larger than the male. About this time the Ypecaha began to show traces of extreme bad temper. It would unhesitatingly attack anyone entering the aviary, at first by frontal attacks, which were more or less easily beaten off, but afterwards by much more effective attacks from the rear. Its habit was to lay in wait behind a bush or bunch of weeds, and then spring upon its victim from behind, clutching the calf of the leg with its claw and then driving in its pickaxe-like beak. The effect upon visitors to the aviaries was astonishing. Artificial silk stockings were very poor protection. I must confess to having had at times some amusing moments. However, its attacks at last began to become more

serious. My man complained that he had had holes pecked in his trousers. I did not mind that, but when he stated that he had holes pecked in his boots also and wanted new ones, I thought it time to take action, so when I next entered the aviary and it started to peck holes in my boots, I gave it a little kick, which unfortunately disabled its leg. I found the next day that the reason for its savagery was that it had a nest in the reeds. The nest was entirely concealed in the centre of a dense clump of water-mint, and was approached by a runway of broken-down reeds. The eggs were cream coloured with mauve and brown spots, and were exactly like some eggs received direct from Brazil. I have no doubt that I should have bred some interesting hybrids had it not been for my hasty temper.

This year I turned into the same Aviary a pair of the Wood Rails and the smaller of the Ypecahas. One of the Wood Rails was much larger than the other, and I thought at the time it must be a different species. For some weeks nothing happened. The cock remained equally tame, he would always come to be played with, and would sing at request, much to the amusement of visitors, but I never saw the hen, and the Ypecaha was equally wild. Early in July I noticed the beginning of a nest in a willow about 6 feet above the water, on 15th July this contained five eggs, one of which I took for my collection. On comparing this egg with the Ypecahas' egg laid the preceding year, and with those from Brazil, I was surprised to find that there was practically no difference. As the Ypecaha is a very much bigger bird, I thought that the eggs would also be larger, but this is apparently not the case. The Wood Rails having the Aviary to themselves, were not disturbed. The cock sat by day and the hen by night, and as the former was so tame I was able to get some good photos of him on the nest. On 4th August four young ones were hatched, these remained in the nest all the next day. How they were got down I do not know, but on the 6th I found the cock brooding two pretty little dark chocolate coloured young ones. I concluded that the hen had the other pair, but if this was the case she evidently let them die, as I never saw them. The cock now built a nest of dead reeds about 6 inches above the water, and for the first two days looked after his young ones entirely himself.

They fed readily from his beak, taking soaked bread, small seed,

and maggots. The third day the hen resumed charge of them at night, leaving the cock at times for a little exercise and recreation. During all this time I have not heard either bird singing, and the cock did not present himself for his daily petting.

At ten days old the young became much shyer, possibly the influence of the hen, but as the cock still takes charge of them by day I am hoping that they may grow up reasonably tame.

About the middle of August I went for my holiday, so have no particulars of happenings during that time. On my return in September I found the young birds had grown remarkably and were independent of their parents. They were about two-thirds the size of their parents, and were already assuming the adult plumage, the orange on the breast of the larger of the two being very conspicuous. The smaller bird was much duller in colour. They were very shy, and kept closely to the thick cover of the reed bed. Not much is known of the wild life of the Wood Rail, but writing of the Ypecaha, Hudson says :—

“ These Rails are found as far south as the thirty-fifth parallel of latitude, and are abundant along the marshy borders of the Plata, frequenting the vast reed-beds and forests of water-loving *Erythrina critsa-galli*. Where they are never persecuted they are bold, pugnacious birds, coming out of the reeds by day and attacking the domestic poultry about the houses and even in the streets of the villages situated on the borders of their marshy haunts. But when compelled to place man on the list of their enemies, it is a difficult matter to get a sight of one ; for, like all birds that rise laboriously, they are vigilant to excess and keep themselves so well concealed that the sportsman may pass through their haunts every day of the year and the Ypecaha still be to him no more than a ‘ wandering voice ’. But even persecution does not entirely obliterate a certain inquisitive boldness which characterizes them. Usually they roam singly in quest of food, but have reunions in the evening and occasionally during the day, especially in gloomy weather. On misty days they often wander to a distance from the covert, walking with an easy, somewhat stately grace, jerking the tail at every stride, and running with a velocity no man can equal. Where there are woods they usually fly, when disturbed, into a tree ; and it is in connexion with this habit that the Ypecaha sometimes makes a curious



Ypecaha and Cayenne Rails.



Cock Cayenne Rail with young 2 days old.

Photos by W. Shore Bailly

To face p. 308

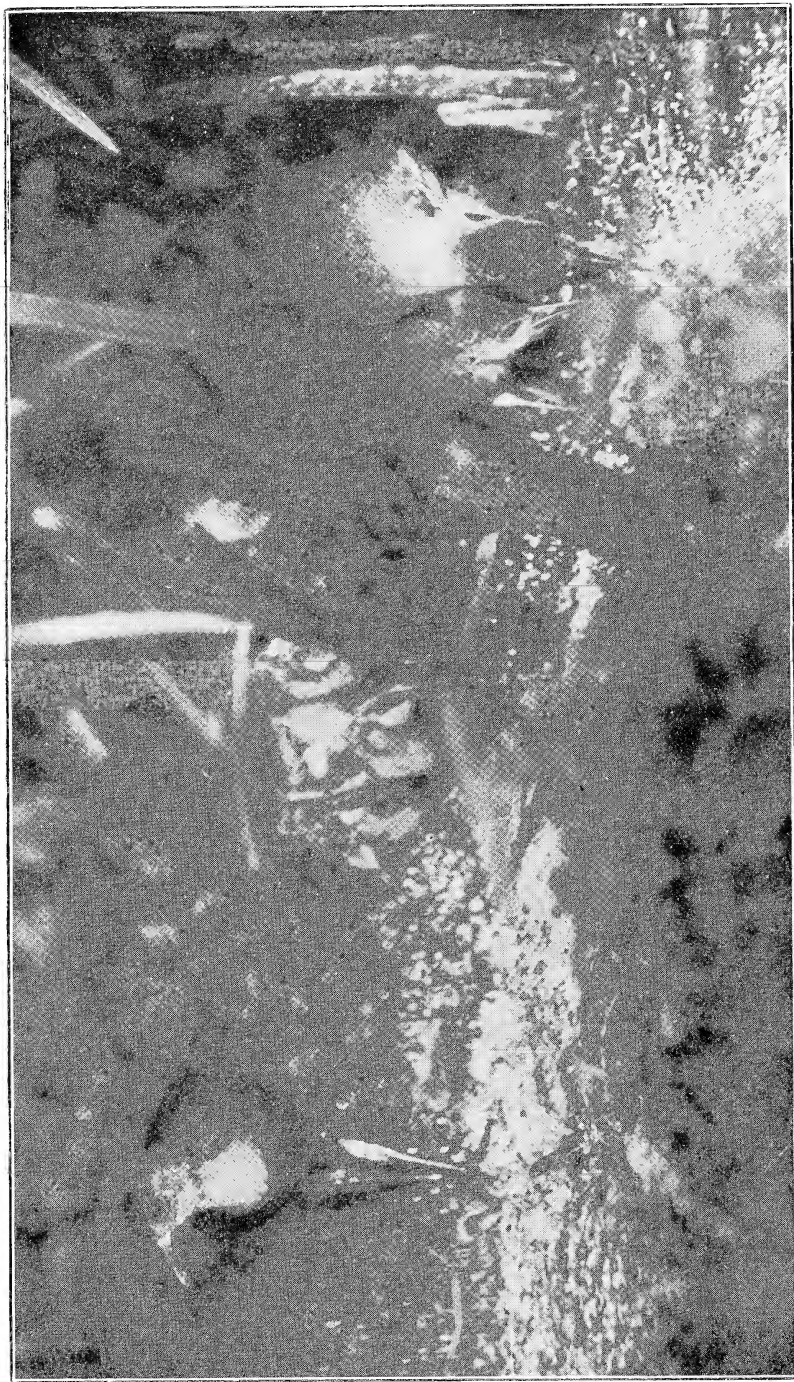


Photo by W. Shore Bailey.

Cock Cayenne Rail with young 6 weeks old

mistake in places where it has not been much shot at. One day, while pushing my way through a dense growth of rushes, I saw two Ypecahas, not 15 yards from me, on the horizontal branch of a tree, to which they had evidently flown for safety. I was anxious to secure them, but surprised at their temerity, and wishing to find out its cause, I approached them still nearer, and then stood for some time observing them. It was easy to see that they fancied themselves quite safe from me while off the ground. In the most unconcerned manner they continued strutting up and down along the branch, jerking their tails, and turning about this way and that, as if to tantalize their baffled enemy by ostentatiously displaying their graces.

“When surprised on the open ground the Ypecaha lies close, like a Tinamou, refusing to rise until almost trodden upon. It springs up with a loud-sounding whirr, rushes violently through the air, till, gaining the reeds, it glides a few yards and then drops : its flight is thus precisely like that of the Tinamou, and is more sounding and violent than that of the Grouse or Partridge. On spying an intruder it immediately utters a powerful cry, in strength and intonation not unlike that of the Peafowl. This note of alarm is answered by other birds at a distance as they hastily advance to the spot where the warning was sounded. The cry is repeated at irregular intervals, first on one side, then on the other, as the birds change their position to dog the intruder's steps and inspect him from the reeds. I have surprised parties of them in an open space, and shot one or more ; but no sooner had the survivors gained their refuge than they turned about to watch and follow me, sounding their powerful alarm the whole time. I have frequently been followed half a mile through the rushes by them, and by lying close and mimicking their cries have always succeeded in drawing them about me.

“Whilst screaming they rush from side to side as if possessed with frenzy, the wings spread and agitated, the beak wide open and raised vertically. I never observed them fight or manifest anger towards each other during these performances ; and, knowing the pugnacious spirit of the Ypecahas, and how ready they are to seek a quarrel with birds of other species, this at first surprised me, for I was then under the mistaken impression that these gatherings were in some way related to the sexual instinct.

“ Whilst watching them I also remarked another circumstance. When concealing myself amongst the rushes I have been compelled to place myself so disadvantageously, owing to the wet ground, that any single bird straying accidentally into the space would have discovered my presence immediately ; yet the birds have entered and finished their performance without seeing me, so carried away are they by the emotion that possesses them during these moments. But no sooner has the wild chorus ended than, aware of my presence, they have fled precipitately into the reeds.”

Since writing the above the Cayenne Rails have made another nest and are again incubating, which points to their being double brooded (29th September).

THE SMALLER AMERICAN SHORT-TAILED PARROTS

By J. DELACOUR

In addition to the Amazon Parrots (*Amazona*) which have already been dealt with there are certain other American genera which must be mentioned here :—

THE SHORT-TAILED PARROT (*Pachynus brachyurus*) is a perfect miniature Amazon, its length not exceeding 8 inches. It has a large beak and square, very short tail. It is a green bird with red patches on the shoulders and another at the root of the tail. It is a native of the Upper Amazon and the Equator, and is very rarely imported.

The genus *Pionus* contains several species, they are smaller than the Amazons ; their under tail-coverts are always red, and the rest of their plumage usually spotted with various colours. Generally speaking, they are gentle and affectionate, and sometimes are good talkers. The sexes are alike.

THE BLUE-HEADED PARROT (*Pionus menstruus*) from South America has a blue head, neck, and upper chest, with a black crescent on its cheeks ; the rest of the body is yellowish green ; sub-caudals red ; beak brown and pink. It is the species most commonly met with in captivity

THE SORDID PARROT (*P. sordidus*) from Venezuela has a mingled blue and grey head, its back, wings, and tail are grey and green ; the under part of its body is grey shot with violet, sub-caudals red ; the beak orange red.

MAXIMILIANS PARROT (*P. maximiliani*) from South-East Brazil and Paraguay, has a blue head, neck, and breast, and a red forehead ; its abdomen is green, with blue markings, sub-caudals red and blue ; its back, wings, and tail yellowish green ; beak yellowish brown.

THE RED-BEAKED PARROT (*P. corallinus*) from Colombia and the Equator is deep green, lighter beneath with a violet band across the breast ; beak and sub-caudals bright red.

THE WHITE-FRONTED PARROT (*P. senilis*) from Central America has the forehead, front of the head and a spot on the throat white ; breast and neck blue and dark green ; the abdomen, back, wings, and tail are olive green mingled with brown and blue ; sub-caudals red, beak yellowish.

THE WHITE-HEADED PARROT (*P. seniloides*) from Venezuela and Colombia is green shaded violet on the breast, with the top of the head and cheeks white, spotted with black and red ; sub-caudals red, beak yellowish.

THE BRONZE-WINGED PARROT (*P. chalcopterus*) from Colombia is greenish and blackish blue, with the wing-coverts brown and red sub-caudals ; tail and quill-feathers, blue ; beak yellowish.

THE VIOLET PARROT (*P. fuscus*) from Guiana is brown variegated with purple above, reddish purple underneath ; forehead red, beak grey and yellowish white.

THE HAWK-HEADED PARROT (*Deropterus accipitrinus*) is one of the choicest and prettiest Parrots. Fairly large, but slender and lengthy, it has a somewhat long tail and strong, short beak. It differs from the Amazons in having the feathers at the nape of the neck very much developed and rounded, which it can raise like a collarette ; its feathers are red, edged with blue, as are also those of the breast and abdomen ; the head is brown, streaked with pale grey. The rest of the body is green, variegated with black and blue on wings and tail ; beak black. Hawk-headed Parrots are natives of Guiana and the banks of the Amazon, they are charming birds in confinement, gentle and confiding,

equal to the Blue-fronted Amazon, although they do not talk so well. When first received they are delicate, but hardy when once acclimatized. Unfortunately they are rare and seldom met with.

THE BLUE-BELLIED PARROT (*Triclaria cyanogaster*), from South-East Brazil, is likewise very rare. It is green, the middle of the abdomen is violet blue and the beak white. It lives very well in captivity. It is the same size as the *Pionus*, but has a longer tail.

THE CAÏQUES are distinguished by their slight figures and light colours, in which different shades of yellow and red predominate, ranging from orange and yellow ochre to creamy white.

THE BLACK-HEADED CAÏQUE (*Caica melanocephala*) from Guiana, has the top of the head and the quills black, the mantle, wings, and tail green; an emerald green spot under the eye; nape, face, neck, thighs, and sub-caudals different shades of yellow; breast, abdomen, and sides tawny white, beak and feet black.

THE WHITE-BELLIED CAÏQUE (*C. leucogaster*) from the Lower Amazon has the head, neck, and sub-caudals varying shades of yellow; breast and abdomen tawny white; back, wings, tail, and thighs green; beak yellowish white; feet light horn colour.

C. xanthomera from High Amazon is distinguished by its yellow thighs from the preceding species.

THE RED-CAPPED PARROT (*Pionopsittacus pileatus*) from South-East Brazil, is a delightful little bird of about the same size as a Caïque, having a short narrow tail. It should be treated like a Parrakeet. The male is green, with the wings and tail partly blue; the vertex and sides of the head red; beak light grey and brown. The hen has no red on the head. This species is very gentle and familiar, and makes an admirable cage or aviary bird. Unfortunately it is rare. There are about ten more species in the genus, all very pretty, which have never been imported, except the *P. caica* of Guiana, which is green with a black head, the neck feathers and the nape are yellow outlined with black, wings and tail marked with deep blue.

The genus *Urochroma* comprises another group of very pretty little American Parrots, with bright and varied colouring, which unfortunately are never brought over nowadays. Formerly it seems that at least one species, *U. cingulata*, was occasionally brought to

Europe, for this little bright green Parrot, having part of the wings, back, and tail black, with yellow and pinky lilac markings, is often represented in eighteenth century pictures. It inhabits Trinidad and Venezuela. The same may be said of that curious Vulturine Parrot from the Lower Amazon (*Gypopsittacus vulturinus*).

A BURIED COMPLEX

By the MARQUESS OF TAVISTOCK

Psychology tells us that if certain instincts and impulses are checked and driven in upon themselves and denied their natural outlet, the result is a warping of the personality and the appearance of odd prejudices, or perhaps fears. What is true of men also seems to be true, to a certain extent, of birds. Apart from the simpler pleasures of eating, drinking, bathing, and exercising himself, the two main interests in one adult Broad-tailed Parrakeet's life are the joys and cares of marriage and the excitement of a real good fight. He does not just fight to secure a mate or hold what our modern scientific field naturalists call a "territory"; he fights for the pure joy of fighting, and his wife is scarcely less fond of it than he, either giving him the moral support of much back-chat directed against his opponent, or herself engaging the latter's lady in open conflict. Now it stands to reason that if you take the poor fellow and condemn him to permanent solitary confinement within the narrow bounds of a Parrot cage, something is pretty sure to go wrong. He may just pine away and die after a few years; or he may take to feather plucking; or, if his body survives the strain of the changed environment, his mind may become affected; in other words, he may develop a buried complex. Cock Broadtails hardly ever show that intense affection for human beings, which is the main reason why so many tame birds make bad breeders, but long confinement in a cage is apt to affect their minds in a way which causes them to be a vexation of the spirit to anyone wishing to pair them up. I knew one whose complex caused him to hate all birds of his own genus, and most of all the females of his own species, but who was filled with a passionate and promiscuous affection for all Parrots and Parrakeets of other genera, regardless of sex. Another, although a perfect fiend with

human beings, was terrified of the hen who was provided for him, and as a cock Broadtail, like a bishop, must rule his household wisely and well if any good is to result, nothing ever came of *that* ménage. A third was so affected by the sight of the female, when, after long years of waiting, she at length gladdened his eyes, that he fell dead from his perch in a fit of apoplexy.

For several years I have had two hen Brown's Parrakeets; one, mated to a cock kindly lent me by one of our members, is at present engaged in rearing a family. The other has already figured in the story of "The Diplomat". The poor old diplomat, a Mealy Rosella, at length joined the majority last winter, and the Browns was left without a mate of any sort or kind, let alone the cock of her own species with whom I had always been longing to provide her. But when I visited the Crystal Palace Show what should I see but a fine cock Brown's, a winner in his class, industriously feeding the bars of his cage. I decided instantly that if it could possibly be arranged I would soon give him something better to feed than that. On looking him up in the catalogue I found he was priced at a very high figure—about twice his actual value, but visions of a nest of young Brown's floated before my eyes and despite the fact that I have invariably had the worst possible luck with every bird I have paid an outrageous figure for in order to make up a breeding pair, I claimed him the same evening. A few days later, however, my hopes were dashed to the ground, for I received a letter from the Show Secretary telling me that for some mysterious reason my cheque only reached him after the Show was over, and in the meantime the owner—a lady—had decided not to part with the bird. I determined to have one more try and wrote again asking whether the Brown's owner would be prepared to consider lending him for breeding purposes if she received half of any brood that might result. Not long afterwards I had a very kind letter from her saying that on thinking things over she had decided that "Joey" would be happier with me, and so I could have him after all. He had been privately imported and they had had him some time, and were very fond of him. I thanked her very much indeed, saying that I felt rather a brute for taking away a pet to which she was attached; I did agree, however, that, apart from selfish considerations, Joey (who was merely

steady and not finger-tame), would be happier in an aviary and she would find the talking Parrot with which she contemplated replacing him, a very satisfactory substitute ; remembering, however, the odd inhibitions from which caged Broadtails are apt to suffer, I suggested returning Joey if he did not approve of the hen on being first introduced, as with birds of his family it is usually a question of love or hate at first sight, and both passions are usually enduring. It did not seem worth while that Joey's owner should have to part with him if he was not going to settle down to increasing the Brown's population. In due course Joey arrived and was introduced to his intended bride. He seemed rather overwhelmed by the novelty and excitement of his surroundings—freedom in a big aviary and the presence of numerous other birds of his own and allied species. However, for a little while things seemed to promise well ; he displayed to the hen, who showed the combination of appreciation and modesty proper to the occasion. Later in the day, however, he was inclined to attack her and drive her about, but as she did not seem to take his hostile demonstrations very seriously, I put it down to over-excitement and decided that if I kept him they would soon settle down. So Joey and the hen occupied adjacent aviaries with a communication passage open between them. At night I shut them up in separate shelters, for I did not dare to leave them together in a confined space. Weeks went by, but the wretched Joey refused to settle down. Sometimes he would be quite friendly and allow the hen to sit by him on the same perch, but soon afterwards he would start driving her savagely from pillar to post. I tried everything I could think of to induce him to behave : I hung up a nest-box, hoping that the suggestive influence of the round, dark hole might restore equilibrium to his erratic soul ; but he ignored it. Most of the time he spent on the side of the aviary nearest to that occupied by the other pair of Brown's, whom he was evidently dying to fight. I therefore covered that side with canvas, so that he could no longer see them. But Joey was irreconcilable ; for years he had been denied the glories of battle : the calls of his neighbours excited and maddened him ; he longed to sink his beak once more in someone's flesh and feathers and if no better substitute were provided he would gladly make use of the hen. Finally I grew completely disgusted with him ; I could no longer

afford to devote a whole aviary to him, so I decided to give him his liberty. There was, as I thought, no unattached hen, other than his present companion, on whom he could bestow his affections. If he wanted a fight there were some eight pairs of Broadtails, in different aviaries, who would be only too ready to oblige him and perhaps when he had had his bellyful of fighting his complex would be solved, and he would be ready to be sensible. I accordingly removed him to the aviary up the garden from which liberty birds are usually started, and when he had learned where the food was, I let him go. Joey wasted no time ; as soon as the top of the flight was opened he darted through it. A few moments later he was heading for the aviaries like a parched traveller in the desert who sees a spring before him. He passed over the hen Brown's aviary, not heeding her for a moment and flung himself on to that occupied by the pair. The cock, though moulting, was more than ready : Joey had a perfectly glorious morning.

Fortunately, however excellent the intentions of the combatants, not much damage can be done through half-inch mesh wire-netting ; it is too narrow to permit the terrible grip that tears the upper mandible completely off. By the evening Joey was tired and his toes were somewhat sore, but he was otherwise uninjured ; he had, however, conceived some respect for his opponent, and spent most of the following day harrying a young pair of Yellow-rumped Parrakeets who did not at first realize that he could not reach them and that the murderous threats he hurled at them could not be carried into execution. For some weeks he divided his time between the pair of Brown's and the pair of Yellow-rumps ; although socially a failure, he was not in other respects a fool, for he returned to the aviary up the garden for food and made use of its shelter in bad weather with a readiness surprising in a bird so newly turned out and strange to the place. As time went on, the Yellow-rumps not only lost their fear of him, but the cock began to resent his presence and finally made himself master. Joey led an unhappy existence, assaulted and bitten in the toes both by the Brown's and the Yellow-rump, but the perverse fowl still preferred to play the part of unwanted hanger-on to both pairs sooner than accept the advances of the nice lady who was still longing to bestow her heart upon him. Finally he did leave the two unfriendly couples to console himself

elsewhere, but, alas! not in the way I either anticipated or desired. It happened that there was a second pair of Yellow-rumps. The hen was very forward in every sense of the term; the cock, a new arrival, was less so. Joey, by this time had had almost enough of warfare and was beginning to be inclined to allow an innings to the tenderer passion. He made advances to the hen Yellow-rump which her husband was too poor-spirited to resent. Soon he was feeding her through the wire. The abandoned lady believed in having two strings to her bow, for when her proper mate offered to feed her she made no bones about accepting his attentions also. My aviary attendant then put a stop to the scandal by catching up the Brown's and condemning him to the society of a young cock Crimson-wing. Joey bit the Crimson-wing in the leg, and was then removed to his old aviary, next the hen Brown's. I have not ventured to let her join him, as three months' liberty have put him in splendid condition and she might have difficulty in escaping if he attacked her. He now spends all his time on the opposite side of the aviary calling to the Yellow-rump; but the Yellow-rump has completely forgotten him.

THE RELATIONSHIP OF LOCALITY TO HEALTH IN BIRDS

By the MARQUESS OF TAVISTOCK

It is a matter of common remark that two writers on aviculture, both experienced, will often give the same species of bird an entirely different character, one describing it as hardy, the other as delicate and short-lived. If the reader has had good luck with the bird in question, he is apt to consider that there was something lacking in the aviary management of the authority who has labelled it delicate; if, on the other hand, he has been unlucky, he will probably come to the conclusion that the person who found it hardy was unusually fortunate in coming across those exceptionally robust specimens that occasionally occur among many delicate species, which will live and thrive under conditions which are soon fatal to nine-tenths of their fellows.

I have had the, perhaps not altogether unusual, experience of keeping a large collection of the same set of species of birds in three different

districts consecutively, during a period of some twenty years or rather less. Careful post mortem examination has been made of practically all birds that died. As a result of my observations, I have discovered an interesting, if not very welcome fact, which throws further light on the contradictory experiences of apparently equally skilful aviculturists. *Quite apart from feeding and housing, temperature and degree of moisture, condition of soil and condition of bird, certain districts are far more unhealthy than others for certain species of birds.* This would appear to be due to the fact that some localities, for reasons I do not pretend to understand, are more favourable than others to the rapid growth and virulence of bacteria inimical to birds, particularly those causing pneumonia and perhaps also enteritis. So marked is the effect of a locality favourable to harmful bacteria that it may outweigh every other influence commonly and rightly regarded as having an important bearing on avian health. There are some birds I have found it almost impossible to keep alive in one district even during perfect weather, and when in perfect condition and ideally housed, which in another district gave no trouble at all in worse weather, when newly imported and housed in dirtier, draughtier, more sunless, and in every way more unsuitable aviaries. This does not mean that there is any virtue in dirty and ramshackle aviaries, as we are sometimes half-inclined to believe when we see birds which we can hardly keep alive breeding in the aviaries of our friends, under very inferior conditions ; but it does mean that there is another extremely important factor which has hitherto, perhaps, rather escaped notice. We are told that many of the bacteria causing human diseases are present in small numbers nearly everywhere and that it is only when certain conditions favour their undue increase, or when a person's vitality is lowered that they become dangerous. The same is doubtless true of bacteria causing disease in birds. We can do a tremendous lot to protect our birds from disease by keeping them in perfect plumage and bodily condition by correct feeding and housing. There are some birds that will never get ill anywhere so long as their housing and feeding are of the best ; there are many which will keep healthy in most places if their food and accommodation are excellent. Some of the commonest and most troublesome diseases are also to a great extent controllable. Septicæmia in its various forms can be

prevented by cleanliness and the use of movable aviaries, unless perhaps in cases where the whole area has been infected by the release of large numbers of diseased birds from a dealer's store. Tuberculosis can also be kept down by the same precautions coupled with generous feeding and the disinfection of the ground by dressings of salt. There are, however, one or two highly susceptible species of birds which one cannot count on keeping free of the scourge for a reasonable period even when great care is taken. Enteritis has many forms: usually it is a chill ailment, and can be, to a great extent, prevented by not exposing birds to a greater degree of cold and wet than they are able to bear with comfort. There are, however, kinds of enteritis which in certain districts attack certain species of birds with a frequency and virulence which renders the keeping of those birds a well-nigh hopeless task. But undoubtedly far and away the worst microbe enemy one has to contend with is that causing pneumonia. In the existing state of our knowledge, its attacks, to a very great extent, can be neither prevented nor cured. It is not kept away by cleanliness and disinfectants; it destroys both young birds in sheltered nests and adults in perfect health and plumage; it is far more active in the warm months of the year than in the cold ones and it is not even discouraged by hot sunshine and a long spell of drought. Locally it can be very severe and render the keeping of quite a number of desirable and ordinarily hardy birds a troublesome or even hopeless business. "Pneumonia districts" are not necessarily large: one place may be very bad and another, not more than a dozen miles away, comparatively safe. Neither does there seem to be much connexion between the prevalence of pneumonia and the severity of the climate: just as pneumonia is worse in fine, warm weather than during the frost and wet of winter, so the mildest and most southerly localities may be far more deadly than the bleaker and colder north. In conclusion I should like to emphasize the tremendous importance to the aviculturist of proper post-mortem examination of all birds that have not been killed by quite obvious accident or violence. Without it he is working more or less in the dark, for I have not the slightest hesitation in saying that the most experienced people living will be wrong in quite half their diagnoses of the complaints of birds found dead or ailing. If a person finds that he is losing many birds from

enteritis, it is an indication that he needs to provide more warmth and shelter. If the birds die even in cosy quarters, he had better give up the species that furnish regular casualties and confine himself to something hardier. Of course, enteritis is sometimes due to poison, usually mineral, for birds are very resistant to vegetable poisons and fairly discreet about avoiding plants that would harm them ; in poisoning cases the nature of the trouble is usually apparent to the expert who examines the bodies. If birds are lost from tuberculosis, septicæmia, or aspergillosis and from some diseases of the heart, the need is indicated of movable aviaries and disinfection of soil, shelters, and cages. If space is limited, concentration on hardier species and the abandonment of the more delicate ones is again the only policy. If fatty degeneration of the internal organs is reported, the remedy is, of course, plainer and more suitable feeding and more opportunity for exercise, while frequent reports of pneumonia announce the unwelcome news that the aviculturist is living in an unhealthy district and may have to abandon one and perhaps several species that he may have kept successfully in the past in another locality.

AVICULTURAL NOTES

By the EDITOR

One of the clauses in the new Wild Birds Protection Act provides that "it shall not be lawful for any person without the leave of the Secretary of State knowingly to liberate imported birds of any species", which means that a certain branch of aviculture becomes illegal.

One of the most attractive branches of aviculture, indulged in by few, has been the liberation of certain tropical species which have remained in the neighbourhood and bred under natural conditions, returning at frequent intervals to their aviaries for food and shelter. Under such conditions, several species have lived well, and we have never heard of their doing any harm or increasing to the extent of becoming a nuisance to the community.

If a species is introduced from a tropical to a temperate climate it cannot survive for any length of time without a certain amount of

protection during the winter, and hence its increase can readily be checked; but because some ill-advised persons thought fit to introduce a hardy European species such as the Little Owl, every other foreign species that we in this country would wish to study in life is condemned to strict captivity; unless it shall please the Secretary of State to allow it to fly round our gardens.

But we cannot forget that the introduction of species both of birds and mammals to countries other than their own has done untold harm in many cases, and so we cannot be surprised at the insertion of the above clause, though what it has to do with wild bird protection is not altogether clear.

But we believe that wherever harm has been done it has been because the introduced species has been moved to a climate or other conditions more favourable to its existence than it enjoyed in its native habitat.

An event of considerable avicultural interest is that of the successful breeding during the past summer of the Red-breasted Goose at Woburn. For the past fourteen years a small flock of these rare and handsome Geese has enjoyed semi-freedom without the least attempts to reproduce their species, but this year one disappeared from the flock and was later discovered sitting upon a clutch of eggs which were taken and hatched under a hen.

Another very interesting achievement has been the successful rearing of a brood of Roulroul Partridges in Mr. Whitley's collection at Paignton. We believe this is the first time the species has been reared in Europe, though a young bird was once hatched in the late Sir William Ingram's aviary at Monte Carlo.

The Roulroul is a bird of the dense jungle, and is not likely to attempt to breed unless kept in an aviary very densely stocked with growing shrubs and undergrowth, a miniature jungle, in fact.

Mr. Whitley has been breeding Glossy Starlings for some few years past, and has bred them again this year. There has been some uncertainty as to the species. They are certainly some species of *Lamprocolius* and probably *chalybeus*.

A very interesting hybrid has been reared in the Primley aviaries, between Burchell's Starling *Lamprocolius australis* and the Red-winged Starling *Amydrus morio*, two very distinct species.

An important discovery with regard to Rollers has been made by Mr. Whitley. He had several specimens of Lort's Roller (*Coracias lorti*) and these have gradually changed colour and become identical with specimens of *Coracias caudatus*, proving that the former is merely one phase of plumage of the latter, and that the name *C. lorti* must in future be regarded as a synonym of *C. caudatus*. It is only by keeping birds in captivity and carefully observing them that such discoveries can be made.

OFFICERS FOR 1927

The following two members have been nominated to serve on the Council in place of Dr. M. Amsler and Mr. R. I. Pocock, who retire by rotation :

MR. J. SPEDAN LEWIS,

MR. E. G. B. MEADE-WALDO.

The following two members have been nominated to fill the posts of auditor and scrutineer respectively :

DR. M. AMSLER,

MR. R. I. POCKOCK.

MEMBERS' ADVERTISEMENTS

The following Rule, passed by the Council on 15th October, will come into force for all small advertisements appearing in the MAGAZINE for January, 1927, and thereafter :—

“ The price of advertisements in the Members' Sale and Exchange column is *one penny per word*, to be paid for in advance, *and no advertisement must exceed thirty-six words*, name and address included. All members of the Society are at liberty to use this column, and advertisements must be received not later than the 20th of the month.”

CORRESPONDENCE

BARRING ON BUDGERIGARS

SIR,—A very interesting letter under the above heading appeared in *Cage Birds*.

The writer, Mr. A. J. Shipton, sought an explanation of why adult hens become barred on the forehead when breeding.

As no reply has been received, I should be greatly interested to hear if either you or any member of the Avicultural Society can throw any light upon this phenomenon.

DENYS WESTON.

PRINCE LUCIAN CONURE

SIR,—It may interest some of the members of the Avicultural Society to hear of the breeding of the Prince Lucian Conure (*Pyrrhura luciani*), but unfortunately the young died at the age of one week. The hen laid four eggs, after an incubation of twenty-one days two were hatched and two dead in shell, and all eggs were fertile; the hen sat the whole time during incubation, but made no attempt to feed the young after hatching. When found dead, their crops were quite empty, and do not appear to have been fed from the time of hatching.

I should be very interested to know through your valuable Magazine if there is any record of the Prince Lucian Conure having been bred and reared.

FRANCIS R. CHILD.

[In the article on *Conures and their Allies*, by Messrs. Delacour and Berlioz, which appeared in our July number, the authors refer to this species as being "common in captivity and easily reared". We believe, however, that in England at any rate it is extremely rare.—ED.]

NESTING OF *ANOMALASPIZA BUTLERI*¹

SIR,—Before the flight of my aviary was finished I released about two dozen of my birds into the shelter. Some of them almost immediately appropriated nesting-boxes, which were hung round the

[¹ An African Serin = *Serinus imberbis*, C.B.M., xii, p. 355.—Ed.]

walls, each being screened with a 2 ft. square board hung from the ceiling in front of it.

On 27th May, having turfed the flight and made a long-shaped curved mound, like a golf bunker at one end, I opened the door and out they went. Under the excitement of a larger and better world some of them forgot their eggs in the boxes, and these birds were among that number, as I later found a solitary egg of theirs in the shell of a large coconut. On 17th June I discovered an open nest built of grass stems alone, in a little recess on the ground among the grass half-way up the side of the mound with two eggs in it. The hen laid two more. The eggs are about the size of those of the Canary, white covered with small dull red spots, some of them at the thicker end uniting to form blotches. By 3rd July there were three young birds several days old; one died later. On 9th July the most forward of the two left the nest, before it could fly; the next day the other, only half feathered, climbed out on to the top of the mound, where I found it sunning itself and looking about at everything that attracted its attention, opening a large orange-yellow throat expecting food when any other bird came near. This second bird was drowned a few days later. I had stupidly supplied a bathing dish with steep sides, quite forgetting about the young birds: now, I have made a shallow pond.

The young bird is now much like its mother, except that the under parts are greyish white with a faint tinge of green; the throat is streaked with dark brown, which does not appear in the adults; bill, horn; legs and toes, flesh coloured.

In a previous note I described the birds with yellow throat and under parts. In the cock bird this is really green like the rump, but that shade which looks yellow in the sunshine. The hen is much duller, with the upper part of the breast brown. Now they have eggs again in a nest built a few inches off the ground in the middle of a clump of ornamental grass called Ribbon Grass by nurserymen. This nest is much deeper than the last.

H. L. SICH.

MEMBERS' SALE AND EXCHANGE COLUMN.

The charge for Members' advertisements is ONE PENNY PER WORD, and no advertisement must exceed thirty-six words, name and address included. Payment must accompany the advertisement, which must be sent on or before the 20th of the month to Mr. T. H. NEWMAN, "VERULAM," FORTY LANE, WEMBLEY PARK, MIDDLESEX. All members of the Society are entitled to use this column.

FOR SALE.

BLUE-BRED Olive Budgerigars (94½ per cent blue), £6 a pair; Blue-bred Greens from same nests, £3 a pair; Blue-bred Yellows, £4 a pair. Few only.—J. BRADSHAW, Ruhebank, Sulby Grove, Bare, Morecambe.

COCK Ruficauda Finch, unrelated pairs Red-crested Finches, two cocks one hen Stanley Parrakeets, three hen Redrumps, pairs Massena Lorikeets.—A. DECOUX, Géry, Aix-sur-Vienne, France.

PESQUET'S Parrot, adult male, two Yellow-streaked Lories (*scintillans*), three Black Lories, four Yellow-throated Hanging Parrots (*Loriculus pusillus*). Wanted: Owls, Touracous (except Donaldson's and White-breasted), Glossy Starlings (except Royal, Burchell's and Superb). Price on application.—J. S. LEWIS, 20 Mortimer Crescent, N.W. 6.

ONE female Ringed Teal, £5, or exchange other waterfowl.—D. G. SCHUYL, Kralingscheweg, Rotterdam, Holland.

WANTED.

WANTED, pair Versicolor Teal in exchange for pair Ringed Teal.—DOOLY, Formby, Lancs.

HENS, Adelaide, Ruficauda Finch, Parrot Finches, cock Pectoral Finch.—A. DECOUX, Géry, Aix-sur-Vienne, France.

Bird Notes, 1920, Vol. iii, Series 3 to end, inclusive.—T. H. NEWMAN, Verulam, Forty Lane, Wembley Park.

Bird Notes, 1907–1914, inclusive; *Avicultural Magazine*, Vols. i–v, First Series.—Mrs. A. A. PRESTWICH, Kent's Farm, Winsor, Southampton.

URGENTLY, Parrot Finches, highest price given.—WALTER VOIGT, 13 Feodora Street, Jena, Germany.

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Our Mexican collector arrived last month with an unrivalled collection of Rainbow, Indigo and Nonpareil Buntings, Red Cardinals, Humming Birds, etc., and all interested should write for a complete list which will be issued immediately upon arrival.

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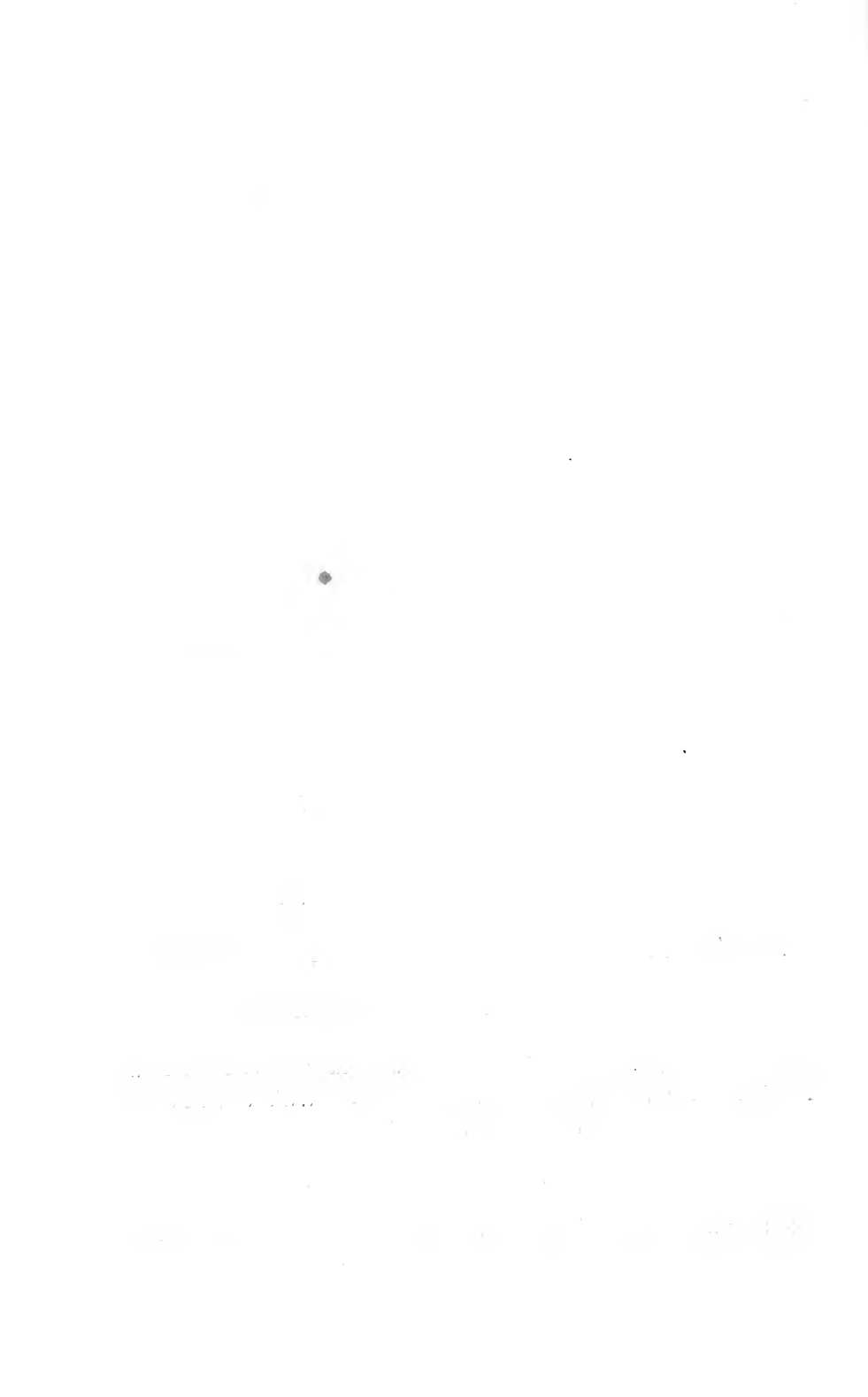
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FOREIGN & BRITISH BIRDS
IN FREEDOM & CAPTIVITY

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THE PINK-HEADED DUCK (*RHODONESSA* *CARYOPHYLLACEA*)

By ALFRED EZRA, O.B.E.

Last December I mentioned the safe arrival of this very rare Duck, and the accompanying plate gives a very good idea of the shape, attitude, and colour of this bird. My specimens are still in robust health and are quite tame, but so far have not shown any signs of breeding. This may be on account of my aviaries, which do not afford the birds sufficiently natural conditions. They went through last winter safely, being shut into a warm place at nights, and let out all day, except when the pond was frozen. I feel certain that under more natural conditions they would breed without great difficulty, and I hope this will be accomplished in the near future.

THE BREEDING OF THE LAVENDER FINCH AT LIBERTY

By the MARQUESS OF TAVISTOCK

In the spring of 1925 I obtained three or four pairs of this charming little Waxbill, and after keeping them confined in an aviary for a few weeks, gave them their liberty. They had grown accustomed to entering the aviary shelter by a hole a few inches square and continued to return

to feed. There are two ways of feeding Waxbills at liberty if you do not wish to have the bother of trapping the all-devouring Sparrow on an open feeding-tray. Either you can train your birds to feed inside a closed shelter and enter it by a small opening: as the food is not visible from the outside, wild birds will not discover it. Or you can put the seed tray in the open and put over it a sort of dish cover arrangement made of wire netting of a mesh that will admit Waxbills but exclude Sparrows. (Large birds, such as Pigeons or Parrots, can be trained by gradual stages in an aviary before release to feed inside a kind of box where the food dish is out of sight of the entrance hole. The box must be placed on the wire roof of an aviary flight and must have no bottom. Light will then enter it from below and prevent the feeding dish from being too much in the dark, but wild birds will be unable to enter it from below as they would ultimately learn to do if they could get directly underneath it.)

The Lavender Finches stayed about quite well, and in late August I noticed a young one on the feeding tray. It looked rather rough, and the weather becoming vilely cold and wet, I did not see it again. Four old birds remained at the beginning of winter, and of these three survived until the following spring. They were given their liberty on all but the very worst days and were shut up in the warmed shelter each night by the simple device of putting, each afternoon, an inward-pointing funnel of wire netting in the entrance hole of the shelter and feeding place. Birds going in to feed were unable to find their way out again until released on the following morning by the removal of the funnel. Visitors were sometimes not a little surprised to see quite a cloud of Waxbills and Grassfinches dart from the aviary when let out after breakfast and could hardly believe that every one of the little birds would find its way safe home again by the evening.

In early summer I bought three or four more Lavender Finches to bring the flock up to about eight. I often saw them about, but it was not till fairly late in September that I noticed a Lavender Finch that did not seem to know its way out of the aviary flight which it had entered to feed. I knew at once that it must be a young one, and the glasses showed this to be the case. It was a much stronger bird than that of the previous year, and I discovered later that it was one



Photo. D. Seth-Smith.

Pink-headed Ducks ♂ ♀ (*Rhodonessa caryophyllacea*).

To face p. 326.]

of a nice brood of four, all of which have done well and can now hardly be distinguished from their parents. I have often been surprised at the amount of cold that very late broods of Waxbills can stand, and the rapidity with which they grow to maturity in the chilly, shortening days of autumn. The first Cordon Bleus I ever bred left the nest in October in a deluge of cold rain followed by a hard frost and a biting wind. Yet they did not seem to mind a bit.

The Lavender Finch is certainly to be recommended to anyone who likes to try a few of the commoner small foreign birds at liberty. It is, if in good plumage, not more difficult to acclimatize than other Waxbills. It is a good stayer, is extremely beautiful, and shows itself a lot. Unlike the Firefinch and common Waxbill it seldom gets egg-bound through absurd efforts to breed in February and March. A highly insectivorous species, it will "work" your rose-trees for aphids with all the grace and efficiency of a Blue Tit and unlike the latter bird will not proceed to undo the merit of good deeds by destroying your green peas and pecking holes in all your choicest pears and apples.

In conclusion, I ought perhaps to add that if Waxbills are fed only inside a shelter it is sometimes necessary to give young birds a little help in finding the seed by fixing small dishes of millet just inside and just outside the entrance hole. As soon as they feed freely on the outside dish it can be taken away and the inside one alone be left. Then, when they pass freely through the hole, the inside dish also can be dispensed with. A little care and judgment is needed, for if the outside seed dish is too large and conspicuous and is left too long, you will find that you are training Sparrows as well as baby Waxbills—a most undesirable contingency to be avoided at all costs.

THE BREEDING OF THE GOLDEN-CROWNED CONURE (*CONURUS AUREUS*)

By CAPTAIN REGINALD WAUD

Among the birds I have bred in the aviaries this year is the Golden-crowned Conure. Last year these birds bred in an outdoor aviary. They laid three eggs and hatched one young one, the other two eggs being unfertile. This year they took to the same box as last year, laid

two eggs about the end of April, but as they are rather shy birds I never went anywhere near the box, so as not to disturb them. I looked in the box in June, quite the beginning, and saw there one young bird and one bad egg. The youngster was covered entirely with grey down, and it seemed to remain in that condition for a long time, and I felt rather nervous as to whether it would ever grow any feathers; but in July it started, and left the nest about the 20th August. It exactly resembles its parents in plumage, and was quite difficult to distinguish from the old birds, except that the colouring in the old birds is rather more opaque and the young bird has a little more of a bluish sheen on it. I have kept the old birds outside winter and summer for three years, and they are really beautiful, and do not seem to mind the cold in the least. I think this is the first time this bird has been bred in captivity.

This may interest our members. Last year I bred hybrids (from Adelaide cock and Pennant hen). There were three young birds: one (I believed to be a cock) I gave to the Zoological Society. The other two I kept; they were out all winter. I believe the two I kept were a cock and hen, but I kept them with an Adelaide cock, an odd bird I had, and to my surprise this young hen hybrid paired with the Adelaide and laid six eggs. Although she was not in her adult plumage she incubated the eggs, and three hatched; but unfortunately they died at four or five days old, the reason being, I think, my wife gave a large garden party to all the village, over a hundred people being present. This so upset the birds that the hen hybrid would not brood the young for some hours and they died. But I shall try again next year with the pair of hybrids, and shall hope for better luck.

THE BREEDING OF THE ST. HELENA SEED-EATER (*SERINUS FLAVIVENTRIS*)

By W. SHORE-BAILY

I was very much surprised on looking through Dr. Hopkinson's new book to find that there is no record of the breeding of this bird in England. As it is quite often imported it is possible, of course, that it has been bred and the breeder has not thought it worth while to record the event.

Under the circumstances the following short account of my birds may be of interest. Early in 1925 I turned a pair into a medium-sized aviary containing a number of other birds, the largest of which were a pair of South American Thrushes. At the end of May the hen built a small cup-shaped nest in the privet bush and laid four eggs, white, sparsely spotted with reddish brown. Ten days later four young ones were hatched. These did well, and when I went for my annual holiday were well feathered ; but on my return I could find no sign of them, so conclude that they must have been killed by the Thrushes. This spring I put the pair into an aviary, where except for a pair of Peacock Pheasants they were the largest birds. They went to nest in June in a creeper, and on 4th July three young ones left the nest. These were coloured like their mother, but three weeks later were beginning to show some of the bright colours of the male bird. On 15th July these birds were again sitting, this time in the top of a small conifer. Four young ones were reared from this nest, and at the time of writing the males are nearly in full colour. The St. Helena Seed-eater is a good aviary bird. The cock is handsome and a good singer, and they are not quarrelsome with other birds. Habitat : South Africa.

AFRICAN PARROTS

By the MARQUESS OF TAVISTOCK and M. DELACOUR

We will now consider those Parrots, which are usually placed in two groups, *Pioninæ* and *Psittacinæ*, but which we shall find it more convenient to study together.

They are perfect as cage birds and are considered the best talkers, but they live just as well in an aviary.

The GREY PARROT (*Psittacus erythacus*) is well known to be an unrivalled talker, and it is only by accident that one occasionally meets with a female without any aptitude for talking.

Everybody knows the Grey Parrot with its ashy grey plumage and red tail. It is a native of Equatorial Africa. An acclimatized Grey quickly adapts himself to captivity, but newly arrived specimens have a bad reputation for delicacy, due sometimes to their liability to chills, but more often to infectious diseases contracted on the voyage

in dirty and crowded cages. A Grey Parrot's cage should be large enough for it to be able to spread its wings. The swing, with which most Parrot cages are furnished, should be removed, as well as the grating at the bottom of the cage, both being useless. The tray should be filled with a thick layer of sand and grit. A piece of wood or a small branch of a non-poisonous tree should be given so that the bird can gnaw it and amuse itself; also a bath, which must be easy to get into and too heavy to be upset. Grey Parrots do not often bathe, but like an occasional wash, and cannot keep their plumage in really good condition if they are deprived of it.

Their seed mixture should consist of two parts canary, one part millet, one hemp and one sunflower, with monkey nuts and fruit. A little piece of cake does them no harm now and again for a treat, but tea, coffee, cream, milk, meat or butter should never be given. Young, freshly imported birds often require maize boiled daily until they begin to eat seed, but the maize should be withheld as soon as they can do without it. Bread and milk is sometimes good for a sick Parrot, but is bad for those in health.

Grey Parrots when caged must be kept out of draughts and not exposed to sudden changes to temperature, although when they are really acclimatized they can stand cold well; I have a very fine specimen which seems perfectly happy in an outside aviary on a cold winter's day.

The young often give vent to a disagreeable cry, but it is due to fear and is abandoned as the birds grow older and tamer. An adult Grey, unlike an Amazon, never screeches when it is full grown, although it may whistle shrilly from time to time.

Hen birds often lay in captivity, but it is rare for young to be reared, probably because Grey Parrots are not often encouraged to nest in confinement; also it is only very rarely that cocks are brought over.

Individuals having white or red patches in their plumage are not uncommon, and wholly white and wholly pink specimens with red tails have been imported. Albino Parrots, of any species, are usually females.

Although slow and deliberate in their movements, Grey Parrots show much intelligence, and there is no doubt that some understand

the meaning of certain words which they have been taught. Most of them become devoted to one person only, and are spiteful to others, but some are gentle even with strangers. Unlike Amazons, they are never guilty of biting those whom they really love.

The Grey Parrot has been bred at liberty in England.

The TIMNEH PARROT (*P. timneh*) from West Africa is darker grey and has a brown tail ; it is imported now and then, but is said not to be as good a talker as the Grey.

The curious Parrots known as Vasas come from Madagascar and the neighbouring islands. They do not attract one by their beauty but make affectionate and amusing companions.

The GREATER VASA (*Coracopsis vasa*) is brownish black, the wings, lower back, and tail being dark grey ; the sexes are alike in colour, but there may be a difference in size. It is a hardy species in the sense that it is easily fed, little subject to illness, is long lived in an aviary or a cage, and once acclimatized can winter in the open air. On the other hand, if a Vasa does fall ill, even from a slight cause such as a cold or shortage of food for one day, all treatment usually fails and the bird dies in spite of every attention.

When it becomes tame the Vasa often has considerable talent as a talker and mimic, and shows great affection for its owners, but it is sometimes noisy. Vasas should be fed on canary, hemp, sunflower, monkey nuts and fruit. It is a native of Madagascar.

The LESSER VASA (*C. nigra*), also from Madagascar, differs from the last mentioned in being much smaller. I had one which was the most charming and affectionate bird that I ever owned. It should be treated like the Greater Vasa.

It is a species which, though not delicate, offers only a poor resistance to illness.

The COMORO VASA (*C. comorensis*) resembles the Great Vasa, but is not quite so dark in colour.

C. sibilans, a smaller species, also occurs on the Comoro Islands.

The PRASLIN PARROT (*C. barkleyi*), from the Seychelles, is another small and rarely imported species.

The genus *Pæocephalus* contains small or medium-sized African Parrots, with short tails and large heads. They are prettily coloured,

and once domesticated become charming companions, and learn to say a few words. They are related to the Amazons and other American Parrots, and require the same treatment whether in a cage, aviary, or at liberty, as the Grey Parrot.

The SENEGAL PARROT (*P. senegalensis*), well known by the name of "You-You", is freely imported. It is a favourite with many amateurs, because it is intelligent and amusing, its chief fault being a shrill cry and a tendency to bite in play; some individuals, however, are always gentle. It is a little green Parrot, with head and neck grey and belly orange yellow. The male has a larger and thicker head and beak, and a darker grey mantle, with less green. So far as I know it has not been reared in captivity, although it has shown some inclination to nest.

Specimens in good condition can pass the winter in the open; they are fond of bathing. They inhabit Senegambia.

MEYER'S PARROT (*P. meyeri*), from N.W. Africa, is a pretty little Parrot much like the preceding. It should have the same treatment, but it will not live long unless given more roomy quarters than an ordinary cage.

The YELLOW-FRONTED PARROT (*P. flavifrons*), from Abyssinia, is different shades of green with the top of the head and the face yellow. It is rarely imported.

The RED-BELLIED PARROT (*P. rufiventris*), from E. Africa, is brown, with green rump and belly, and red on the breast and under the wings. A few have come over latterly. The female has no red.

RÜPPELL'S PARROT (*P. rüppelli*), from S.W. Africa, is brown with thighs and under side of the wings yellow; the hen is a bluish green on the lower back, rump and under the tail, being thus brighter than the male.

The BROWN-HEADED PARROT (*P. fuscicapillis*), from S.E. Africa, is green with a brown head, grey cheeks and yellow under the wings.

JARDINE'S PARROT (*P. gulielimì*), from W. Africa, is green with the crown of the head, the fold of the wings, and thighs orange, the lores and upper part of the back black, as well as the lower parts and small wing-coverts. It is larger than any of the others.

LEVAILLANT'S PARROT (*P. robustus*) is still larger with a very big beak; it has dull colouring, a mixture of brown and green, occasionally

a red band on the forehead and fold of the wings. It is a native of S. Africa.

The BROWN-NECKED PARROT (*P. fuscicollis*), from S. Africa, only differs in having the head and neck silvery grey.

All these species, excepting the first two, have been very rarely imported.

Although it inhabits New Guinea, we will here include PESQUET'S PARROT (*Dasyptilus pesqueti*), which is related to the Grey Parrot. This curious bird, so different to other Parrots, is very large ; its beak is long and narrow like a Vulture's ; it is dark brown, with the under parts, part of the wings, and the rump bright carmine red. Male birds have a little red on the head which the females lack.

Pesquet's Parrot is almost unknown as a cage bird, and there is much need of information from owners of any actually living in captivity. I had a female for two or three years ; she moulted and did fairly well on bananas, Savoy biscuits and prepared milk food (Dr. Allinson's food) mixed as for a baby. At times, however, she had digestive trouble, which showed that this diet was not ideal. The person to whom I eventually gave her found her to be fond of bread and milk and raw eggs, and she lived some time longer with these additions to her diet, but always refused seed. Fruit by itself did not nourish her sufficiently. She was very susceptible to cold, and could not live out of doors in bad weather even in summer, but she liked rain to wet her feathers.

My Pesquet's Parrot did not appear spiteful to other birds, and though she threatened those who approached her I think it was from fear. A Budgerigar which had the audacity to attack her had no reason to repent of its boldness, though it was not much bigger than the beak of its enemy.

Pesquet's Parrot has a terrible voice and uses it freely. Its cries remind one of a combination of a Black Cockatoo, a Klaxon horn, and a rattle.

My bird had much character and intelligence, and was very sensitive. If she was sent to a new place she became morose and unhappy and refused food for some days ; she was very much attached to the person who fed her, and allowed herself to be handled, but she did not like strangers.

A VALUABLE COLLECTION FROM THE EAST

Mr. Walter Goodfellow, who has been collecting living birds in New Guinea and the adjacent islands for Mr. J. Spedan Lewis, arrived home early in October with a fine collection of birds including the following :—

- 6 Wallace's Standard-wing Birds of Paradise (*Semioptera wallacii*).
- 6 Greater Birds of Paradise (*Paradisea apoda*).
- 2 Red Birds of Paradise (*P. rubra*).
- 12 King Birds of Paradise (*Cicinnurus regius*).
- 1 Pesquet's Parrot (*Dasyptilus pesqueti*).
- 2 Racquet-tailed Parrots (*Prioniturus platurus*).
- 3 Black Lories (*Chalcopsittacus ater*).
- 3 Pleasing Lorikeets (*Hypocharmosyna placens*).
- 1 Red Lory (*Eos rubra*).
- 2 Yellow-streaked Lories (*Chalcopsittacus scintillans*).
- 4 Yellow-throated Hanging Parrakeets (*Loriculus pusillus*).
- 60 Three-coloured Parrot-Finches (*Erythrura trichroa*).
- 1 Sclater's Crowned Pigeon (*Goura sclateri*).

The Wallace's Standard-wings are apparently new to aviculture, and Mr. Goodfellow has promised an article on them for our Magazine. There are also three species of Sunbird and a Bulbul that have not at present been identified.

D. S-S.

SOME NOTES ON THE QUEEN OF BAVARIA'S CONURE (*CONURUS GUAROUBA*)

By the MARQUESS OF TAVISTOCK

Last summer I obtained three specimens of this rare South American Parrakeet and later a fourth, which, however, proved an unfortunate investment; soon after arrival it developed a persistent "wheeze", which no treatment would cure, and finally it started to have fits, one of which proved fatal. On examining the body we were surprised to find a deep hole in the back of the skull, clearly an old injury. How on earth the bird managed to survive several months with such a wound and retain a healthy appetite I cannot imagine.

The three seemed to be quite young, judging by the presence of some green feathers on the cheeks. They were rather exhausted by their journey, and had one or two slight illnesses before they began to do well ; one had also plucked itself on the voyage, but it seems to have abandoned the habit now that it has good food and plenty of amusement. As one bird has a longer and more powerful head than its companions, I am hoping that both sexes are represented. Two of the Conures have now pretty well completed their moult, and are a beautiful rich golden yellow all over except for the dark green wing feathers. The three are on very good terms with one another, but the cock (?) has been influenced by the modern female fashion of " bobbing ", for some weeks ago he bit off the tail of one of his companions. Apparently decided that it suited her, he proceeded to deal with the other in the same way. He seems satisfied with the arrangement, for he has not mutilated their plumage since, nor has he shorn off his own caudal appendage ! The Queen of Bavarias are typical Conures. They have the piercing voices of their genus and the same playful ways and destructive habits. I keep them at present in a large cage, some feet in length, and see that they are supplied with plenty of branches, which they enjoy reducing to fragments. They have very large appetites, eating all kinds of seeds, nuts, apple, and greenstuff.

BREEDING THE BROWN-HEADED FIREFINCH (*LAGONOSTICTA BRUNNEICEPS*) IN FRANCE

By A. DECoux

In early June a Marseilles dealer sent me twelve of these little Waxbills, which had just arrived from Abyssinia. For some weeks I kept them indoors, in one of my bird-rooms. They seemed rather more delicate than the Common Firefinches, and I lost some from chills or bronchitis, for the temperature was then rather low. At the end of July there were only seven of them left, two adult cocks, a young one beginning to assume the adult plumage, and four hens. I turned out the cocks and three hens into a small outdoor aviary, thickly planted and with a comfortable shelter attached to it. We had put up some

pine-branches against the shelter walls and on 4th September I found a typical spherical nest. It stood at about 2 feet from the ground, was made of hay and feathers and had two entrance holes, instead of one like the ordinary Firefinch's nest. This is perhaps a proof of a more cautious and timid character, for the second hole is evidently used to take flight if some enemy should approach the other. Every time one of the Firefinches entered the nest it shut the entrance hole with a feather, so that the nest appeared completely closed. It contained an egg absolutely like the common Firefinch's and two or three young ones, one or two days' old. They were fed by both parents with live insects, chiefly small ants and their eggs, the seeds of flowering grass, and also with regurgitated white millet.

Two young left the nest on 22nd September, about three weeks old. They resembled the young *L. senegala*, though a little darker. The bill was black, with the three small warts, two white and one blue, at the base of the bill, characteristic of the young Senegal Firefinch. About ten days after leaving the nest they were independent of their parents.

In early October the hen repaired the old nest and laid again, but the birds were frightened out of it by a pair of Superb Tanagers, and left their eggs.

This species had not been previously bred in France, but it had been last year in Germany. Herr Karl Nurnzig, the editor of *Die Gefiedert Welt*, wrote me that a pair reared seven young ones in two broods in his son's aviary.

A HYBRID ALEXANDRA × CRIMSON-WINGED PARRAKEET

By the MARQUESS OF TAVISTOCK

The hybrid Alexandra × Crimson-winged Parrakeet I described some time ago has recently completed his first moult. I am inclined to think he is now in adult plumage for, although a Crimson-wing is said to take two or three years to get his full colour, the hybrid has shown himself so exceptionally forward that he is probably by now mature in every respect. He started to display long before he was a year old, and this spring mated with a hen King. Eggs were laid but were

broken, so I cannot say if any were fertile. The hybrid is now a pretty and graceful though not a gaudy bird. His tail has become much longer, bright green above, black underneath, all except the two longest feathers (which are only very slightly tipped with yellowish pink) having a wide pink edging. The head is bright, pale green ; mantle rather darker and more olive green ; flights, olive green ; rump, bright blue ; throat, salmon colour ; breast, pale green shot with bluish mother-of-pearl : a good many of the breast feathers are partly crimson at the sides and near the base. On each wing is a large patch of pale greenish yellow, bordered on the lower edge with crimson. Under the wings are many crimson feathers and there are a few of the same colour over the ribs. The thighs are a mixture of pale green, pale blue, and crimson, each individual feather often showing two colours. It is rather remarkable that the hybrid should show crimson on the breast where this colour occurs in neither parent. It will be remembered that Mr. Astley's Barraband Alexandra had a wholly red breast.

In disposition the hybrid takes after his father rather than his Crimson-wing mother. He is friendly and very lively, displaying even when in full moult. He is also inclined to be a mimic and imitates the calls of Ringnecks, Rock Peplars, and Barrabands. His own call is intermediate between that of his parents, as is his display. Although he has spent practically all his life in a large outdoor aviary and no special effort has been made to tame him, he will fly towards me if I speak to him, come quite close and show obvious pleasure and excitement at being noticed. A curiously pronounced inclination to make friends with man from entirely unselfish motives is characteristic of the Alexandra Parrakeet as a species. No Parrakeet is so easily and quickly tamed, and, like the Banksian Cockatoo, it comes to you, not for the food you may give it, nor in order to be stroked (for it dislikes any form of handling), but just because it likes to be talked to. What conceivable enjoyment a bird, with all its natural wants, including a mate, already supplied, can derive from an exchange with a human being of expressions of mutual esteem and goodwill, I am wholly unable to guess, but the fact remains !

AVICULTURAL NOTES

By the EDITOR

The collection in the Small Bird House at the Zoological Gardens has been enriched by the very generous gift from Mr. Spedan Lewis of three male Birds of Paradise, namely a Wallace's Standard Wing, a Greater, and a King, besides some Three-coloured Parrot-Finches and a Sclater's Crowned Pigeon.

Wallace's Standard Wing has not previously been seen alive in Europe. It is one of those rarities which the late Dr. Alfred Russell Wallace discovered during one of his memorable journeys in the fifties. He found it on the island of Batchian, in the Moluccas, and it was afterwards found on Halmahéra. The Halmahéra bird has been separated as distinct by Salvadori, though the distinctive features are somewhat vague.

It is a strange looking bird, brown in colour, with the breast covered with a large shield of bright green, the sides of the shield being produced into two long tufts reaching down each side as far as the thighs. From the wing coverts spring two long whitish plumes, which end in an elongate spatula.

The collection in the Small Bird House is a very fine one now. No less than eight species of Paradise Birds are represented, namely Greater, Raggis, Prince Rudolph's, Hunstein's Magnificent, King, Wallace's, Lesser Superb, and Princess Stephanie's, and almost all are in full adult plumage.

The display of the Lesser Superb bird is a wonderful sight, which may be witnessed almost any day, the best time to see it being the morning. The hood of soft blackish feathers which grows from the nape, and is generally carried resting on the back, is, during the display, expanded and thrown out on either side in front of the body, and, forming a dark screen, showing off to perfection the vivid green shield which grows on the breast; at the same time the metallic bluish-green

feathers on the top of the head show up as two vivid spots, being divided by the upraised bill and tuft of black bristles above it.

Dr. Karl Neunzig, editor of *Die Gefiedert Welt*, is doing some valuable scientific work on nestling birds, and would be very grateful if English aviculturists would send him dead specimens of nestling Grassfinches, Mannikins, Waxbills, Whydahs, or Weavers. His address is Neue Bismarckstrasse 42, Berlin-Hermsdorf, Germany.

The October number of the *Emu* contains much interesting matter, and an article that will especially appeal to aviculturists describes the successful breeding in captivity of the Boobook Owl. The author, Mr. David H. Fleay, of Ballarat, Victoria, kept no less than five of these owls together in an aviary and a pair of them mated and the hen successfully hatched two chicks. Instead of the other three Owls proving troublesome, they proved of great assistance in the rearing of the young Owls. A series of very excellent photographs showing young and adult birds accompanies the paper.

Another note of interest to aviculturists gives the history of a tame "Currawong" or Pied Crow-Shrike (*Strepera graculina*). It had been reared from a fledgling and became a pet of the household. He was a cunning, quaint, and delightful bird, on the best of terms with the home folks, but rather suspicious of strangers.

In the same number our old friend, Mr. G. A. Heumann, writes on "Mistletoe Birds as Plant Distributors". He describes the tiny and beautiful *Dicaeum hirundinaceum*, which he has constantly observed in the wild state and often kept in captivity. In 1912 he sent a pair to the London Zoological Gardens, where they lived well for some years. He tells us that as an aviary bird this is all that could be desired, an exceptionally good liver, very tame, and beautifully marked; its only disadvantage when kept in Australia is that it attracts the wild birds of its kind, which distribute the mistletoe-seeds amongst his fruit-trees.

The recent stormy weather has driven a good many birds out of their normal environment. A Puffin was discovered on the roof of a house in Hampstead and sent to the Zoological Gardens, while reports were received of another one in North London. At least five Snowy Owls have settled on ships in the Atlantic and been brought safely home, four of them finding their way to the Zoo.

REVIEWS

THORBURN'S BRITISH BIRDS¹

With the publication of the fourth volume of this book a work of great value to bird students is completed, a work which, in spite of its very moderate price, contains no less than 192 coloured plates by an artist unsurpassed in the faithful delineation of birds. Although this is called a new edition, it is really a new work, the whole of the coloured plates being new and specially drawn for this edition. The letterpress has been re-written, and the number of coloured plates is more than double that of the first edition.

Volume IV deals with the Orders *Limicolæ*, *Gaviæ*, *Alcæ*, *Pygopodes*, and *Tubinares*. Perhaps there is no more puzzling group of birds than the Sandpipers, and it is a great help to those wishing to identify them to have accurate coloured plates of all that, or more than are even likely to be met with. Or take the Gulls. How many of us, when staying at the seaside, have been doubtful of the species of some of the Gulls that we have met with. The difference, for instance, between the Common Gull and the Kittiwake is sometimes puzzling unless one carries in one's head the distinguishing features. For our own part, and we commend the practice to all bird-lovers, we always make a list of the birds met with on a holiday, and we find it adds immensely to one's pleasure, and on these occasions a book such as Thorburn's will prove invaluable. Descriptions, however accurate, are unsatisfactory. One cannot picture the bird in one's mind from a

¹ *British Birds*, vol. iv, by Archibald Thorburn. Price 16s.; the four volumes complete, £3 3s. Longmans, Green and Co., Ltd., 39 Paternoster Row, E.C. 4.

description as one can after looking at a really good coloured illustration ; and Thorburn's illustrations are all good, while the letterpress is all that one needs.

D. S-S.

RECORDS OF BIRDS BRED IN CAPTIVITY¹

Aviculturists will be pleased to hear of the appearance of Dr. Hopkinson's book, for every one of them must plead guilty to the desire to breed some species for the first time in captivity, and to be the one to claim the record. But it is not always easy to find out whether a bird has or has not been bred before without wading through a great deal of literature, and we must all be very grateful to Dr. Hopkinson for the immense amount of trouble he has taken to tabulate the existing records in easily accessible form. It was not an easy task, and we know of no one so well qualified to take it on. It is surely a book that every aviculturist will wish to have by him for reference.

The number of species of which there are breeding records is no less than 816, though these are not all British, and these form the first part of the book, the second being devoted to hybrids, of which there are a very large number. Part three consists of a summary of the whole, in which an attempt is made to indicate the comparative value of the records by the use of different kinds of type.

To trace every existing record is a very difficult task, and it would indeed be extraordinary if none had been missed. The author frankly admits that there must be many sources of information that he has been unable to tap, and many unrecorded successes of which he is ignorant. His book should bring to light these sources, and any missed records will be incorporated in a future edition.

Of the Snowy Owl (page 118) the author could find "nothing more than a record of incomplete success", yet if he will refer to Vol. V of the AVICULTURAL MAGAZINE (first series) he will find at pages 72 and 182 Mr. St. Quentin's account of the successful breeding of this species on two occasions.

¹ *Records of Birds Bred in Captivity*, by Emilius Hopkinson, C.M.G., D.S.O., M.A., M.B., B.Ch. (Oxon), F.Z.S., M.B.O.U. London: H. F. and G. Witherby, 326 High Holborn, W.C. Price 15s.

The name of the Common Crane is printed in italics (page 304), indicating a doubtful record, but there is no doubt that a chick was hatched at the London Zoo on 23rd June, 1863, and it lived for twenty-seven years! But some such slight discrepancies as these are inevitable in a first edition of a work of this kind, and we heartily congratulate the author on the completion of a very arduous task.

D. S-S.

CORRESPONDENCE

DR. HOPKINSON'S "RECORDS"

SIR,—All bird-keepers should obtain a copy of *Records of Birds Bred in Captivity*, by Emilius Hopkinson, C.M.G., D.S.O., M.A., M.B., B.Ch. (Oxon), F.Z.S., M.B.O.U., just published by Messrs. Witherby, High Holborn, London. Dr. Hopkinson, the well-known expert, gives most valuable and interesting information on subjects he is so well informed on. The book is cheap, only 15s.

Part II on Hybrids, English and Foreign, is most valuable. Mr. Lee S. Candall, of New York, is quoted for most of the American records. M. Jean Delacour, the great French aviculturist, and Mr. Hugh Wormald, of Norfolk, give valuable notes on Ducks.

All the English species bred in confinement are mentioned, and the hybrids. Foreign hybrids bred are numerous, and aviculturists who desire to go in for this fascinating hobby would do well to study the book. I notice in the book Neunzig says: "Breeding Diamond Sparrows is not easy, and generally takes place only after some time (often years) in captivity." I may say that I purchased a pair from Mr. Chapman last September and they have built a nest in a sheltered aviary already.

T. W. T. MILLER.

A NEW WAXBILL

SIR,—At the October meeting of the B.O.C., Mr. Sclater exhibited and described as *Estrilda xanthopyga* two specimens of a new Waxbill, which had been obtained by M. Delacour from a Marseilles dealer and were therefore believed to have come from West Africa.

I feel almost sure I saw a pair of the same bird at Mr. Whitley's last year, and again this, when they were paired up in an aviary to themselves in hopes of breeding. If they are the same, West Africa as the habitat has no greater claims than East, for Mr. Whitley's birds came, I think, from Chapman's and were therefore more probably from the east side of the Continent. They arrived at the same time, I believe, as the first (or second) lot of Nyasa Lovebirds. Perhaps both the Parrakeets and the Waxbills come from the same district, which aviculturally appears to have been only just opened up.

The new birds are like Common Waxbills, except that where these are pink (brow and rump), the new ones are tawny brown and have yellow brown beaks. Those I saw in the Paignton aviaries in their flight and ways to me suggested Orange-cheek rather than Common Waxbills. May they long survive and may they reproduce, but when their time does come, may they find an honoured resting place with their prototypes!

E. HOPKINSON.

ABNORMAL COLORATION

SIR,—The plate of Mr. Ezra's beautiful blue Alexandrine Parrakeet may make it worth putting on record that there was recently in the Perth Zoological Gardens, Australia, a Yellow-collared Parrakeet which was blue where the normal form is green, and white where the normal form is yellow.

Mr. Le Souëf also informs me that he has seen a yellow bird of the same species with a white collar and about half a dozen lutino Rosellas, and he has heard of Piping Crows with yellow areas in their plumage in place of white.

TAVISTOCK.

A SMALL AVIARY

SIR,—A description of my small aviaries may interest some of our newer members. They are very simple and cheap to erect, but I have found them very good for Budgerigars, Rosellas, Lavender-headed Lovebirds, Orange-flanks, etc., Spreos. I had common small Waxbills, Mannikins, and Madagascar Weavers that did fairly well.

The aviaries consist of a shelter 18 in. wide open in front, made of flooring boards with a roof sloping towards the front, running the length of the aviary. The wire flight is 6 ft. long and 4 ft. wide.

There are three shelves in the shelter. The top one is divided by a bit of wire netting to prevent quarrelsome birds from running along the full length of it. Seed saucers and jars are on the other two.

A number of small branches are fixed about them for the birds to sleep on. I get L-shaped twigs and nail them against the wall or the front of the shelf, inverted or sloping if desired. Nesting boxes are on the top shelf but raised an inch or so above it by slips of wood.

A. A. THOM.

NESTING ATTEMPT BY THE ALLIED SALTATOR

SIR,—I thought perhaps my experience with the Allied Saltator (*Saltator similis*) might be of interest to your readers. I purchased two of these birds from Mr. Chapman last January and turned them into my outdoor aviary. They got on well together and with seven other species of Tanager, besides a mixed collection of other birds. About the middle of May one of the birds got very busy building. This was witnessed by my friend and neighbour, Mrs. W. Lewis, who happened to call one day about this time. So far I had noticed no signs of mating between the two. The nest was built of twigs and grass, etc., lined with wool and hair in a wooden box in a corner of a shelter over which I had fixed a bough of spruce. On completion of the nest the "building" bird went for the other violently. I was out at the time and only rescued it half-dead, and it died of shock during the day. From this I conclude that they were both hens. The survivor then started laying. She laid three eggs and then sat for two to three weeks without result, of course. She then built another nest and produced three eggs. And she repeated the process twice again during the summer, making four nests in all. The eggs are of the colouring of a Blackbird, though about half the size and considerably more pointed at one end. I have kept one of the nests with its three eggs (blown) and shall be pleased to send it to anyone who collects foreign birds' eggs.

R. B. ABELL.

FIREFINCHES AT LIBERTY

SIR,—I thought it might possibly be of interest to other members of the Avicultural Society to hear of the rather odd nesting site chosen by a pair of Firefinches I have had at liberty during this summer. Although they had an abundance of trees and shrubs of every kind to choose from they elected to build their nest in a bundle of peasticks which had been tied up and put with two similar bundles in a wheelbarrow, in an open-fronted shelter adjoining a potting shed.

When the nest was completed, and while I was away for a few days, one of the gardeners who had occasion to use the barrow removed the bundle of peasticks containing the nest and laid it on the ground. He was eventually told it contained the Firefinches' nest, and a few days later replaced it in its original position in the barrow. The Firefinches, nothing daunted, returned to their nest and laid four eggs, which they are at present incubating. The site chosen for the nest is excellent in that it is completely protected from the weather, but dangerous in that the shelter is not altogether free from rats and mice.

If their nest is successful it will be the second time I have bred Firefinches at liberty, as I was lucky enough to have a brood of four young successfully reared two years ago, but in that case the site chosen for the nest was a large low growing bush close to the aviary in which they were fed. It is a noticeable feature with Firefinches at liberty that whereas with most of the small Waxbills, etc., it is advisable to keep them in the aviary from which they are going to be liberated for at least a week or more, in order to get used to their surroundings, Firefinches may be quite safely let out almost immediately, without much fear of their straying.

EDWARD J. BOOSEY.

THE EFFECT OF LOCALITY ON THE HEALTH OF BIRDS

SIR,—Since writing my article on the effect of locality on the health of birds, I have had further striking proofs that it is often the prevalence or comparative absence of injurious bacteria that is the most important factor and not the weather, the temperature, nor the condition of the bird. Last summer, on a hot, sunny day, I turned a Hooded Parrakeet in excellent condition into an outdoor aviary. By the afternoon it was

seriously ill, and I only pulled it round with difficulty by keeping it in the hospital at a very high temperature. Recently, now that the worst months for bacterial infection, according to my experience, are over, I have been allowing the bird to fly in an outdoor aviary during the daytime in all but the very worst weather. Although there is usually a difference of about thirty degrees between the temperature of the outside air and the hot room where it sleeps (where I have to maintain great heat for invalids and delicate new arrivals), it has remained in excellent health. This case is typical of a good many others.

TAVISTOCK.

BIRDS AT LIBERTY

SIR,—I read Mr. Sherriff's article on the breeding of *Sibias* in the November number of the *MAGAZINE* with great interest.

Mr. Sherriff asks whether anyone else has ever tried giving parent birds their liberty when feeding young.

Our older members may remember that I bred the Great Tit and Orchard Finch in 1915, the former were in a small aviary to themselves—they were recently caught birds, and very wild until they hatched their seven young, when both birds, but more especially the male, became very confiding and tame.

This gave us the idea of giving the birds their liberty, which I did by opening the feeding-door of the aviary. The cock immediately flew out and disappeared—I thought for good, but he soon returned with a mouthful of greenfly and fed the hen in the box.

Although there must have been plenty of insect food about he persecuted me for mealworm, which both he, and later on the hen, preferred to anything else. Oddly enough these birds also, like Mr. Sherriff's *Sibias*, used to enter the house and help themselves to cake, etc., even in the presence of numerous people. In 1916 my Orchard Finches again showed signs of breeding, so I put them in the aviary occupied the previous year by the Tits; they built, laid, and hatched, and when the young were two days old I again opened the feeding door with quite satisfactory results. The cock again was the tamer of the two parents. He must have had extraordinary powers of vision, for he would often meet me in a field some 80 yards away

from his nest, and fly straight back with a couple of mealworms for his young. I am not aware that he ever so greeted any stranger.

I also saw him more than once sitting on a telephone wire high above the crowded High Street of Eton singing away and as oblivious of the crowd below as they were of the presence of an American bird above.

In the case of both species, I usually closed the feeding door in the evening, when I was sure both birds were home, and I kept it shut for good when I judged that the young would shortly fly. It is possible that the periodic captivity so imposed made the parents use some of the artificial food and insects which I provided, and that the change of diet when freedom was finally withheld did not produce the same effects on the young as the sudden change in Mr. Sherrieff's case from complete freedom to captivity.

Some three years ago two pairs of Zebra Finches had their liberty in my garden and reared a few young. The old birds had access to the ordinary seeds which were placed in a trap cage. When I caught up the two families in the autumn they were all placed in one aviary, and I was much disappointed to lose all the young in from 24 to 36 hours. I can only presume that they had fed entirely on grass and weed seeds and that the sudden change of diet caused their deaths.

It would certainly be wise if repeating such an experiment to prepare a supply of soaked and sprouting seed before catching up the young.

MAURICE AMSLER.

FIRST IMPORTATION OF BIRDS OF PARADISE

SIR,—It is, I think, commonly believed, and certainly commonly stated, that the first living importation of Birds of Paradise to Europe were the two *Paradisea minor* brought to the London Zoo in 1862. But in Latham's *General History of Birds*, 1821-4, a much earlier case is mentioned under *P. apoda* in a foot-note (vol. iii, p. 183) qualifying a statement in the text that "it is stated that they cannot be kept alive by art". The note reads as follows:—

"The late Mr. Pennant furnished us with an instance to the contrary from Sir Joseph Banks; one of them having been brought alive to England. *Ind. Zool.*, 4to, 13, note x."

I have not seen the first edition of the *Indian Zoology*, but in the second, dated MDCCXC, we find that what Latham refers to is another foot-note (by Pennant) saying :—

“Sir Joseph Banks did me the favour of communicating the drawing of the Common Bird of Paradise brought alive to England. T. P.”

This foot-note refers to an account of Paradise Birds given in an *Essay on India* by J. R. Forster, which forms part of the volume.

Not very much perhaps to go on, but such definite statements by two of the authorities of the time must mean something. Is the drawing mentioned known, or is there other reference in the literature to this important event? A “first arrival” is always noted with interest by present-day aviculturists, and an early “first” like this should be of special importance. I therefore hope that further details are known and will be forthcoming.

E. H.

ERRATA

Page 89. For “Dr. Hapemsôn” read Dr. Hopkinson.

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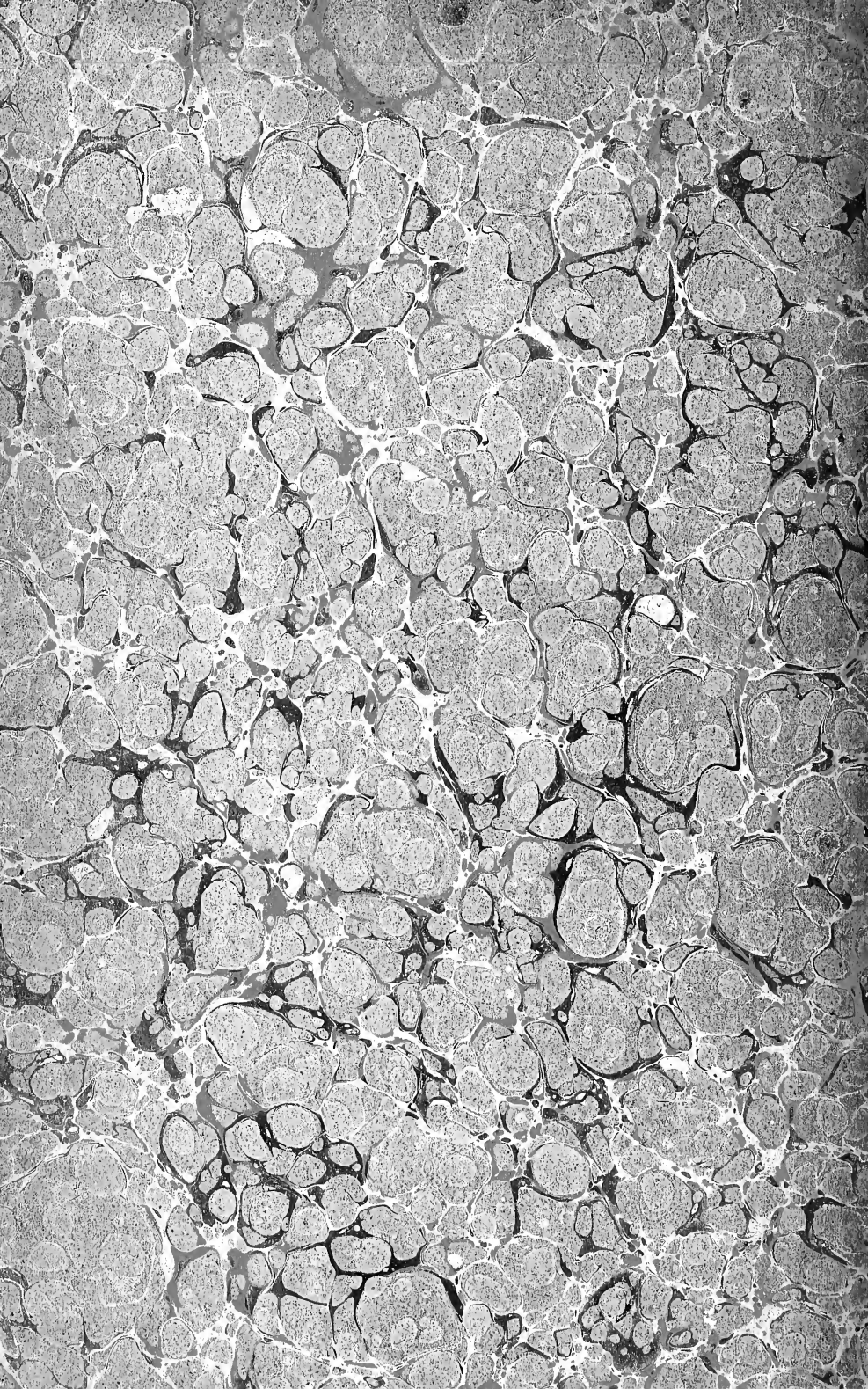
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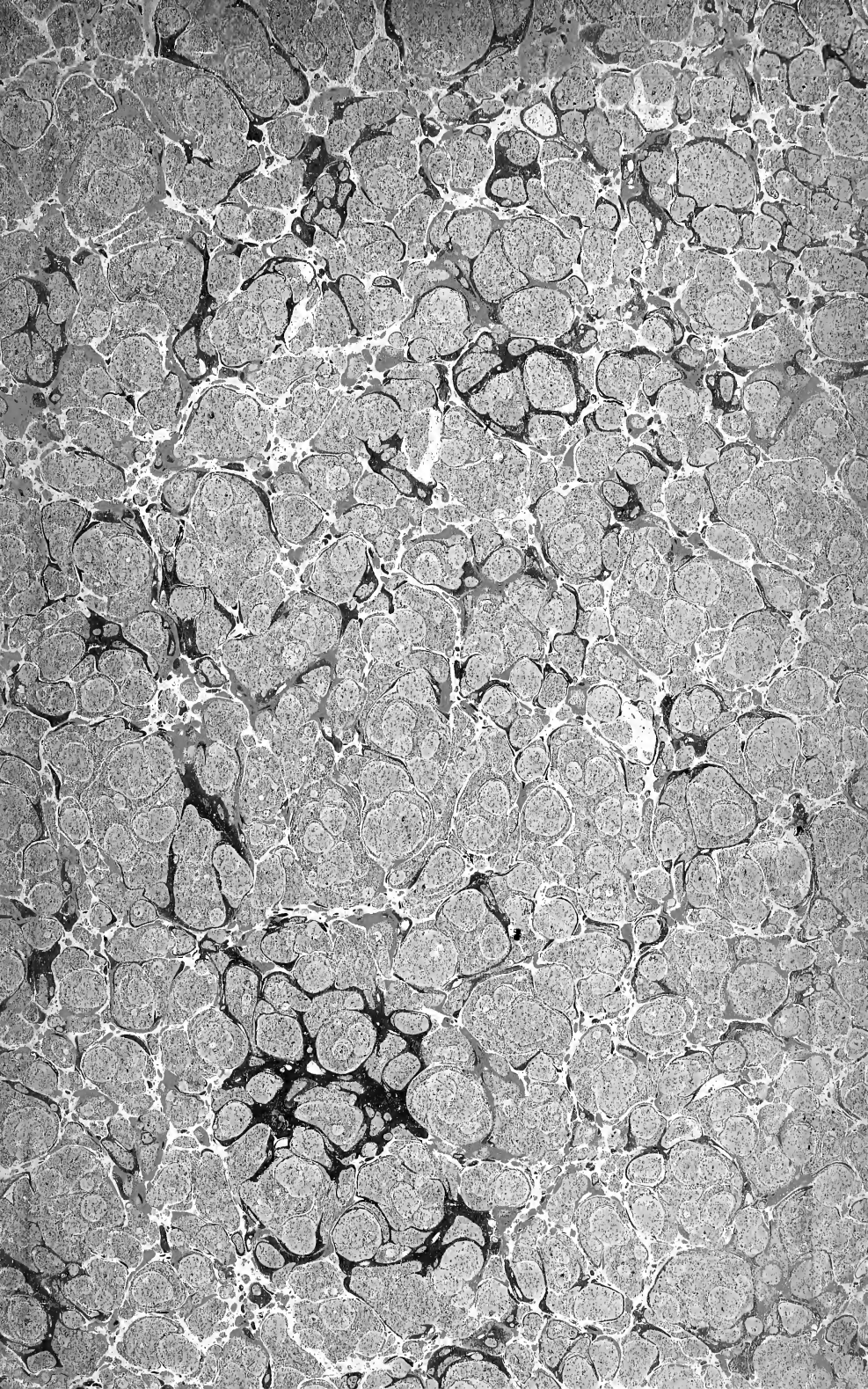
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